

AUGUST 23, 1941

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Railway Age

More



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 Denver & Rio Grande Western R.R.
 Elgin, Joliet & Eastern Ry.
 Great Northern Ry.
 Louisville & Nashville R. R.
 Minneapolis & St. Louis R. R.
 Minneapolis, Northfield & Southern Ry.
 Missouri Pacific Lines
 Missouri Pacific & St. Louis Ry.
 New Orleans Public Belt R. R.
 New York Central R. R.
 Northern Pacific Ry.
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Railway Age

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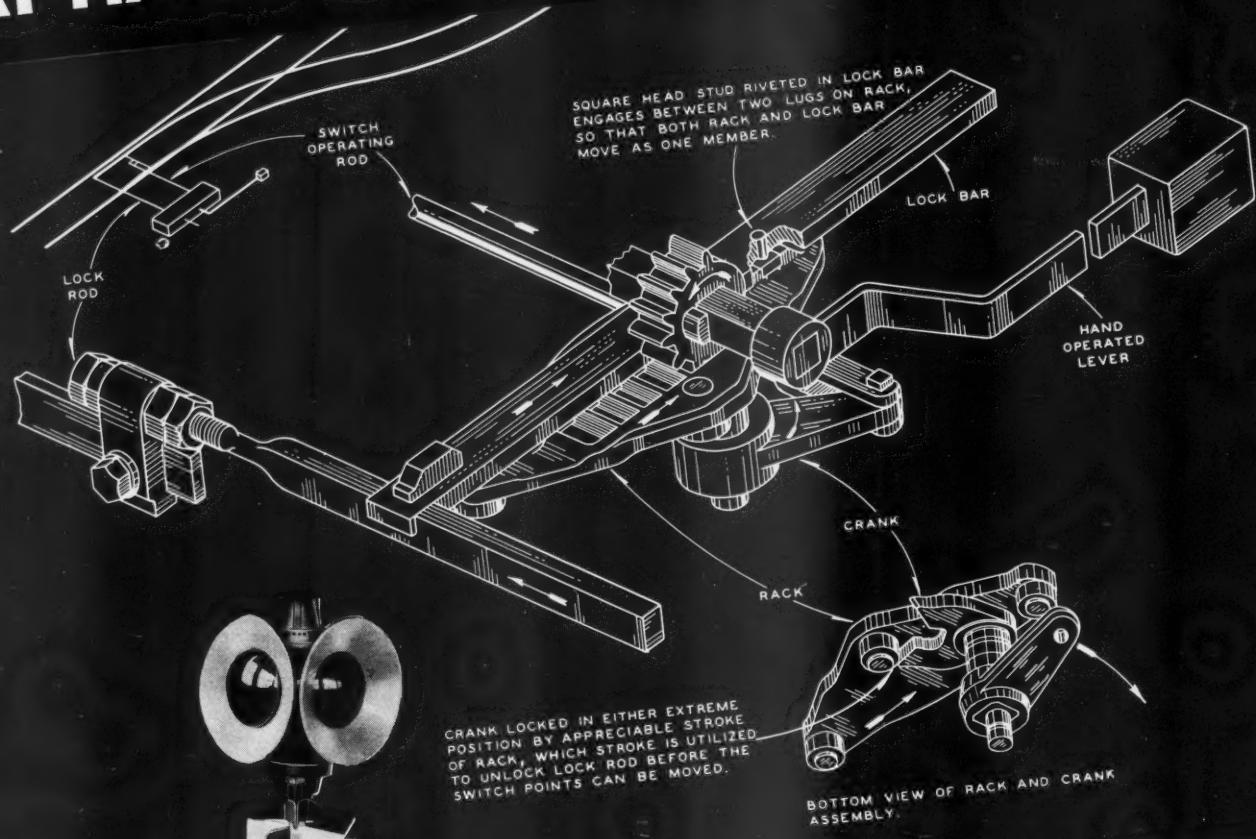
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The Transportation Board and the Wage Controversy

President Roosevelt's recent appointment of the members of the Transportation Board, provision for the creation of which was made by the Transportation Act of 1940, has an important relationship to the pending controversy regarding railway working rules and wages.

Under pressure from the New Deal administration the railways agreed to advances in wages in 1937. Being hard hit by the "recession," they sought a wage reduction of 15 per cent in 1938. In the midst of the resulting controversy, President Roosevelt appointed the "Committee of Six" composed of three railway executives and three labor leaders to formulate a program of (1) management-employee co-operation and (2) legislation helpful to the railways which, if agreed upon by the committee, he promised to support. He next appointed a "fact-finding" board composed of three carefully hand-picked New Dealers which in its report supported the opinion previously and publicly expressed by the President that wages should not be reduced. "The evidence before the board," it said, "has impressed it with the necessity that now rests on government for a complete and thorough-going reconsideration of the relationship of the railroad industry to our national well-being. * * * The existing willingness (of management and labor leaders) to work together for what is fully realized to be a common end dare not be lost by strife over a question essentially small in the light of the ultimate benefits that are bound to accrue from some better answer to the general railway problem."

Three Years' Looking for the "Better Answer"

The Committee of Six promptly sought this "better answer" and recommended legislation the most important purpose of which would be to remove the competitive handicaps imposed upon the railways by state and federal government policies unequally regulating differ-

ent carriers and subsidizing carriers by water, highway and air. What seemed at the time of its passage to be the most important provision of the resulting Transportation Act of 1940 was that for the creation of a three-member Transportation Board to study the relative economy and fitness of the various agencies of transportation; the extent of government aids to each form of transport; and any other matter relating to rail, motor or water carriers which it might deem important to effectuate the declared purpose of the act to "foster sound economic conditions in transportation and among the several carriers."

The act was signed by the President on September 18, 1940. His final appointees to the board were confirmed by the Senate on August 11, 1941 — eleven months after he had been empowered to appoint it; two and one-half years after the Committee of Six had made its recommendations; almost three years after his "fact-finding" board had made its report; and when railway labor leaders were "co-operating" with management in rehabilitating the railroad industry by pressing demands for wages averaging 42 per cent higher than those upheld by the President's "fact-finding" board in 1938, together with other demands all of which would increase railway costs 900 million dollars a year. Certainly the record shows that throughout Mr. Roosevelt's administrations he and the railway labor leaders have joined in doing as expeditiously as possible everything they or anybody else could think of that would be conducive to the financial and physical rehabilitation of the railroad industry!

Well, then, how about the personnel of the Transportation Board which at "long last" has been appointed, and the prospect that it will contribute anything substantial toward solution of the nation's transportation problem?

This country, quite likely, is endangered by external enemies—just as leaders in the New Deal administration insist that it is. Even if we had no such enemies

a couple of years ago, we undoubtedly have them now; because no haughty and militarized people would accept the insults and the open antagonism which our leaders have heaped upon a couple of the world's great powers without feelings of resentment and a desire for vengeance. So, our position being what it is, the utmost effort and efficiency in preparing for the national defense is, plainly, the part of wisdom.

Economics of Transportation and National Defense

War today is largely a matter of technology and industrial management. The nation which **economizes** its resources, its labor and materials—that is, which uses its instruments of production and transportation most efficiently—is the one which is most likely to win any military conflict in which it finds itself engaged. There is no part of the American economy in which there is so little reason, so little taking thought, as in the relationships between the rival agencies of transportation. Highways are planned, built and utilized with little or no reference to the existence of other agencies of transportation. The same is true of the waterways and the air lines. Only the railroads have to give evidence of economic justification in the public interest before new lines may be built or old ones abandoned; for such building or abandonment they must secure permission from government. The division of traffic among the various agencies of transportation is chaotic and haphazard.

Such chaos in so vital a part of the national economy cannot fail to impair the nation's economic and military effectiveness.

The Demand for a Transportation Study

For several years impartial and competent authorities have recognized the need for bringing some consistency into the government's dealing with transportation. For example, in Volume II of its "Government and Economic Life," published in 1940, the Brookings Institution outlined in detail the diverse and mutually-contradictory policies of the government in dealing with transportation. In 1939 the Splawn-Eastman-Mahaffie committee of members of the Interstate Commerce Commission appointed by President Roosevelt to report upon proposed transportation legislation recommended the creation of a "federal transportation authority" to study and report to the government upon needed changes to bring about greater consistency and economy in its dealing with transportation. For several years Chairman Eastman of the Interstate Commerce Commission has hardly ever overlooked an opportunity—when his opinion upon transportation policy has been asked—to urge the naming of some such board.

Not only did the Committee of Six, which the President appointed and which reported to him late in 1938, urge the appointment of an independent transportation board, but its creation was supported by almost all in-

terests, and was opposed by hardly anybody. The duties of the board as prescribed by the Transportation Act of 1940 were somewhat more circumscribed than those proposed for it by the Committee of Six and Mr. Eastman; and it was set up for only two years, with a possible further two-year extension, instead of being made permanent, as Mr. Eastman had recommended. Still, Mr. Eastman was pleased with the provision, and publicly stated that he hoped this temporary board might be but a forerunner of a permanent body to be established later.

But the President Was Not Interested

It is unusual to secure such unanimity of opinion in any controversial field. The board held out a hope that at least a beginning might be made in attacking a condition which is having an adverse effect upon the entire nation and the standard of living of every man, woman and child in America. Unfortunately, however, as developments already narrated show, the framers of the legislation did not succeed in arousing the interest of the President of the United States in the important part of their handiwork. With the nation soon speeding up its defense effort, and with the possibility of transportation shortages developing here and there, it was clear that the studies of this board—if able and energetic men were named to it—might be of material aid in increasing the efficiency of the nation's transportation system, which was so essential to increasing the efficiency of its entire productive machinery. But transportation is just a humdrum detail—nothing spectacular about it; and so the President waited six months after the Transportation Act of 1940 had become a law before he made his first, apparently half-hearted, nominations to the board. Confirmation of his first nominations was delayed by the Senate, which only mirrored the President's own lack of enthusiasm; but finally he did make other nominations which the Senate has confirmed.

If the initiative had been left to the President, probably the board would not be complete yet. Our information is that the incentive came, not from the administration's interest in the matter, but from job-seekers clamoring to be appointed. By completion of the board, some of the job-seekers are satisfied, and the rest are quieted. What with mysterious meetings at sea with Winston Churchill, with plans to bring America into military alliance with Soviet Russia, with the necessity of whipping together rhetoric in behalf of extending the benefits of New Dealism to the peoples subjugated by the Nazis, it is small wonder that the appointments at last made reflect the President's pre-occupation with other matters.

There are no glaring headlines to be won by doing an honest and competent job in transportation. Transportation is merely a part of the tedious and even vulgar work which lies behind all the political and military glory in which the President takes such delight. It now remains to be seen whether the obscure men to whom the President has lightheartedly entrusted such impor-

tant duties can rise to the degree of greatness for which the proper performance of their duties calls.

A Board at Last—Its Task and Personnel

The members of the board are N. L. Smith of New Hampshire, R. E. Webb of Kentucky and C. E. Childe of Nebraska. Quite likely it may be that the youth of Messrs. Smith and Webb rather than lack of ability has, so far, prevented them from winning nation-wide distinction. Mr. Smith is but 42 years of age and Mr. Webb is only 38. Both have experience as members of state railroad commissions, and both have the educational qualifications for their duties—Mr. Smith in particular, since he has behind him a distinguished academic record and holds a doctorate in economics.

If the board merely had to pass upon questions in dispute it seems probable, from their records that Messrs. Smith and Webb would do a fair and competent job. But the task of the Transportation Board is more difficult than that. It not only has the job of arriving at a sound transportation policy for the nation, but also of convincing Congress and the public that its conclusions are sound. This last probably would be a much easier task for men of established national reputations than it will be for the President's nominees to this board. Nevertheless, the magnitude of this part of their task should not discourage the board. If Messrs. Smith and Webb bring all their resources of character and intelligence to their work, it is not at all impossible that they may be figures of national reputation by the time they are ready to submit their final report. Rarely have men so young and of such limited experience been given such an opportunity to qualify as statesmen and write their names in history.

The Strange Appointment of C. E. Childe

The appointment of C. E. Childe is a case apart. Mr. Childe has had long experience in transportation—most of it acquired by activities disclosing a bitter animosity to the railroads. Prior to the enactment of the Motor Carrier Act of 1935 he was an opponent of regulation of motor carriers. As an active officer of the Mississippi Valley Association he has energetically promoted inland waterway development, including especially the stupid and impossible Missouri river project, and has strenuously opposed the extension of regulation to water carriers, while opposing any relief in the regulation of the railroads, such, for instance, as the modification of the long-and-short-haul clause. He is now appointed to an office of honor and responsibility under an Act of Congress, the enactment of an important part of which, while it was under discussion, he strenuously opposed. Testifying in 1939 in the Senate hearings on the legislation which later became the Transportation Act of 1940, Mr. Childe frankly said: "Our interest in this proceeding—our selfish interest, if you please—is that we would like to get the lowest possible rates

for transportation of the commerce of the interior, and an equality of opportunity, in order that we may be able to build up the industry and population of this interior area."

Further testimony by Mr. Childe indicated that he believes inland waterways should be developed, at the expense of the entire nation's taxpayers, and regardless of the amount of this expense, to give the section of the country in which he is interested the same water transportation facilities which are provided by nature along the seaboard. He is either unable or unwilling to distinguish—when he discusses the competition of railways and waterways—between the cost of transportation and the rates for it; insisting on the so-called "economies" of water transportation which exist solely because taxpayers' contributions to waterway costs are omitted. Mr. Childe has, in point of fact, already prejudged the question of the relative economy of the several forms of transportation—which will be the principal controversy regarding which, as a member of the Transportation Board, he will be called upon to sit in judgment. As Senator Clyde Reed of Kansas wrote of this appointment, "If fully informed, the President has not handled this important question in line with the purpose of the law." A man with any sensitiveness to the proprieties would have refused such an appointment when it was tendered to him. It is possible, of course, for an advocate to cease being an advocate when he mounts the bench—but it requires a great deal of optimism to predict that this is what C. E. Childe will do.

"By Their Fruits Ye Shall Know Them"

The President, in short, has appointed such a board that it will be little short of a miracle if the result of its labors turns out to be anything but "just another report." No doubt, we should not lose all faith in miracles—at a time when they are so badly needed. If this board succeeds in rising above the handicaps which have been imposed upon it, its members will deserve the double gratitude of their fellow-countrymen. We sincerely hope they will make this hard and far-seeing choice, and make a report really dealing with "the necessity that now rests on government for a complete and thorough-going reconsideration of the relationship of the railroad industry to our national well-being" to which the President's "fact-finding" board so forcibly and eloquently referred three years ago.

Meantime, what of the "willingness"—to which the President's "fact-finding" board also so forcibly and eloquently referred three years ago—of railway management and labor leaders "to work together for what is fully realized to be a common end * * * in the light of the ultimate benefits that are bound to accrue"? Well, almost nothing has since been accomplished toward attaining the "common end" from which these great "ultimate benefits * * * are bound to accrue." The competitive situation in transportation remains vir-

tually unaltered excepting by effects of the defense effort; and the President is trying to make it worse by promoting the St. Lawrence "seaway" and similar projects. The labor unions have declined all proposals of the railways for revision of burdensome and wasteful working rules. Indeed, they are asking for more such rules and making other demands which, **even while the railroads are deriving earnings from the largest freight traffic in their history**, would precipitate

them into a deficit of 300 to 400 million dollars a year.

Verily, the support promised by the President to any program upon which the "Committee of Six" might agree, and the wholesome co-operation by management and labor leaders upon which his "fact-finding" board based its report, have for three years borne, and are still bearing, wonderful fruit! How true it is that, as the scriptures say, "By their fruits ye shall know them," and you cannot reasonably hope to get figs from thistles.

Limited vs. Abundant Transportation

In the July 26 and August 2 issues, in this space, were discussed the theories of rate-making advocated by Messrs. Edwards and Jensen of the Interstate Commerce Commission. In general, the opinion was expressed that these two experts had overlooked or avoided discussing what is, probably, the most important factor in competitive rate-making, namely, what the public will pay.

It should also be borne in mind that, frequently, those who are charged with making railroad freight rates are not permitted to convert into tariff form the conditions they believe should prevail. For instance, the railroads endeavored to establish free collection and delivery shortly after the Motor Carrier Act became effective. They were told in a divided opinion that they would not be permitted to accord free c. and d. on shipments where the total station-to-station rate was less than 45¢ per 100 lb.

This restriction was based upon a computation by cost accountants of the price at which the railroads could afford to handle l. c. l. traffic *on the average*.

This restriction was placed against the railroads at the insistence of the motor carriers that their field of transportation was being improperly invaded by the railroads. They went to great lengths to demonstrate the minimum cost of transporting l. c. l. merchandise by rail, but they neglected to state the cost of such transportation by truck. The motor carriers certainly did not demonstrate that they could afford to handle traffic for as low as 15¢ per 100 lb., which is the 4th class rate for the initial mileage block in Official Territory. In fact, a study of the cost of truck transportation made by the California Railroad Commission shows that the cost of handling a 100-lb. l. c. l. shipment by truck for 10 miles approximates \$1.05; and that the cost per 100 lb. reaches 33¢ only on shipments in excess of 10,000 lb.

The Commission did not seek to discover whether the cost of terminal handling in a metropolitan center such as New York was typical throughout Official Territory. It merely reviewed the evidence that was introduced and compromised opposing views by saying that the railroad would not be permitted to give free c. and d. where the total revenue per 100 lb. was less than 45¢ per 100 lb.

Again, in the Northwest Petroleum Case, the Commission went off on a paternalistic tangent and said in substance that minimum freight rates should be so prescribed that all agencies of transportation might profitably participate in the particular busi-

ness. It confirmed this doctrine in its decision which considered the rates on petroleum products from South Atlantic ports to interior points.

Not once to our knowledge, since the Transportation Act of 1940 was enacted, has the I. C. C. made any analysis to determine the lowest rate that an agency of transportation could afford to make rather than forego handling the traffic. It has ignored that provision of the law which states that the discriminatory provision of the law shall not be construed to apply to discrimination, prejudice or disadvantage of any other carrier of whatever description.

Just for instance, has anyone ever made a test to determine whether the extension of the ton-mile earnings from the outer crescent to the lake ports, overland by rail from the outer crescent to northwestern port destinations, would produce a lower total cost per ton on coal than the combination of lake and rail cost, plus the handling charges that accrue, including the loading aboard cars at the destination lake port?

Your observer is of opinion, if a study were made of these costs taking into consideration that the empty equipment could be loaded in the reverse direction with ore moving into the area where the coal originated, that some very startling facts would be developed. All of this would be main-line transportation, and added traffic which could be segregated as constituting a particular competitive situation outside the pale of the ordinary construction of the law on discrimination. It would resolve itself into a simple question of whether making rates on this particular traffic to control it for rail movement would cast an undue burden upon any other traffic.

It is not here contended, of course, that the railroads would—at a time like the present—be interested in handling coal all-rail to destinations in the northwest. This instance is cited, merely, to raise the question of the traffic possibilities of railroad transportation; and to question whether they are being fully explored.

The regulatory authorities seem deeply concerned with the allocation among rival transportation agencies, on highly theoretical grounds, of a relatively diminishing volume of *common carrier* traffic. The experimentation and the development in transportation are being largely left to *private carriers*—where regulatory restriction is absent. It seems at least questionable whether this policy is in the public interest; and even more so that it is in the long-run interest of the regulated carriers.

Aluminum-Alloy Streamliners in Chicago—West Coast Service

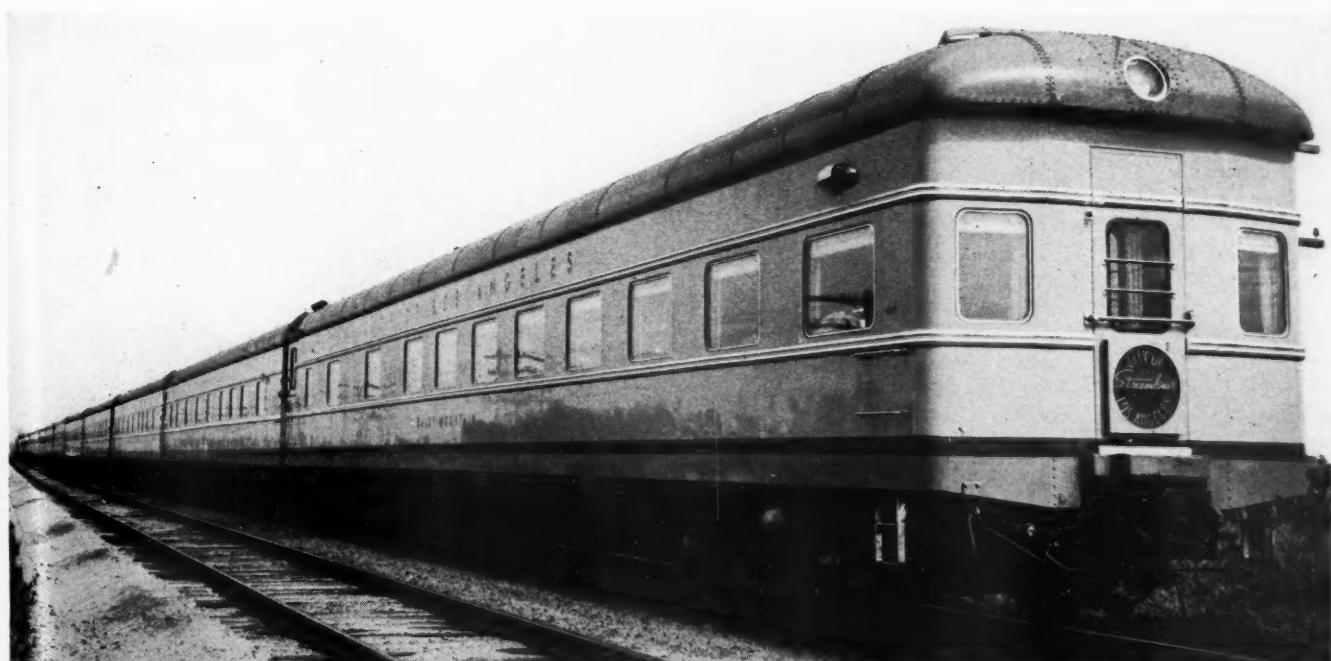


Thirty-Seven cars, built by Pullman-Standard, and two 6,000-hp. Electro-Motive Diesels augment fleet of C. & N. W.—U. P.—S. P. lightweight trains

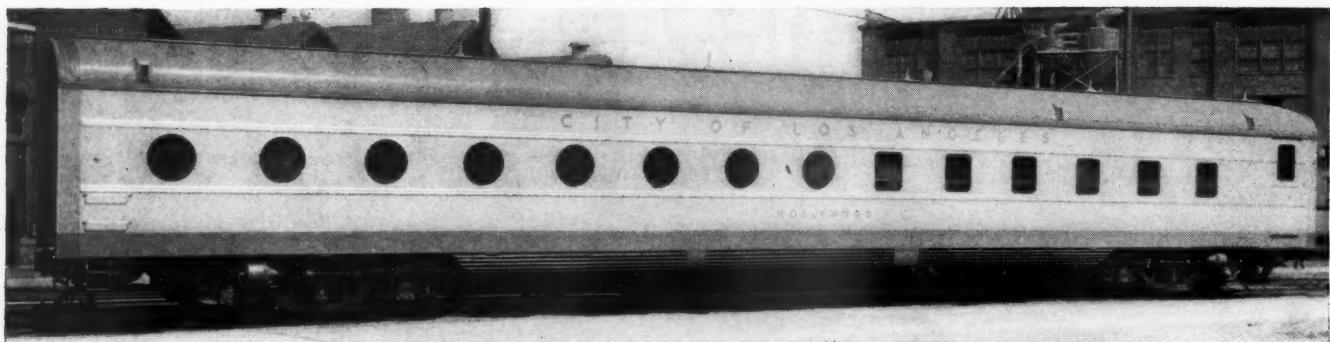
TWO new aluminum-alloy streamliners, the "City of San Francisco" and the "City of Los Angeles," were placed in operation at Chicago on July 26 and August 3, respectively. The addition of these new "City" trains makes two of each name, providing streamliner service every third day on a 39½-hr. schedule between Chicago and the Pacific Coast cities indicated. The new streamliner to San Francisco replaces the "Forty-Niner" which operated on a 54-hr. schedule, and the new streamliner to Los Angeles replaces the former

"City of Los Angeles" train, the "Copper King," which has been assigned to Chicago-Portland service.

While frequently referred to as comprising 17 cars, these new trains each consist of a 6,000-hp. three-unit Diesel locomotive, built by the Electro-Motive Corporation, and 14 lightweight aluminum-alloy girder-type cars constructed by the Pullman-Standard Car Manufacturing Company. The consist of the City of San Francisco includes the following cars: one baggage-dormitory; one 48-seat chair car; one diner-kitchen seating 32, articu-



The New "City of Los Angeles"



Club Car "Hollywood" with Polaroid Windows in the Lounge Section

lated with another diner seating 64; one club-lounge seating 35; and nine Pullman sleepers, the last of which is equipped with an observation lounge, seating 31. The consist of the City of Los Angeles also includes 14 cars, eight of which are Pullman sleepers, but there are two chair cars seating 48 each; one cafe-lounge seating 52; one diner seating 56 and one club-lounge, the "Hollywood," seating 30. No cars in this train are articulated and all car trucks are equipped with Timken roller bearings. S. K. F. roller bearings are used on the City of San Francisco.

The 28 cars in these two trains are part of a lot of 14 new railroad-owned passenger cars and 23 new Pullmans recently built by Pullman-Standard and intended for more-or-less pool service in the two pairs of "City" trains mentioned. An examination of the table of individual car weights shows what can be accomplished in the way of weight reduction with riveted aluminum-alloy construction, although these cars, like those embodying all other types of construction, are penalized from a weight standpoint by the inclusion of a great amount of accessory equipment to meet the tastes of a fastidious traveling public.

Referring to the table, it will be noted that the car trucks weigh roughly 21,000 lb. each, with the exception

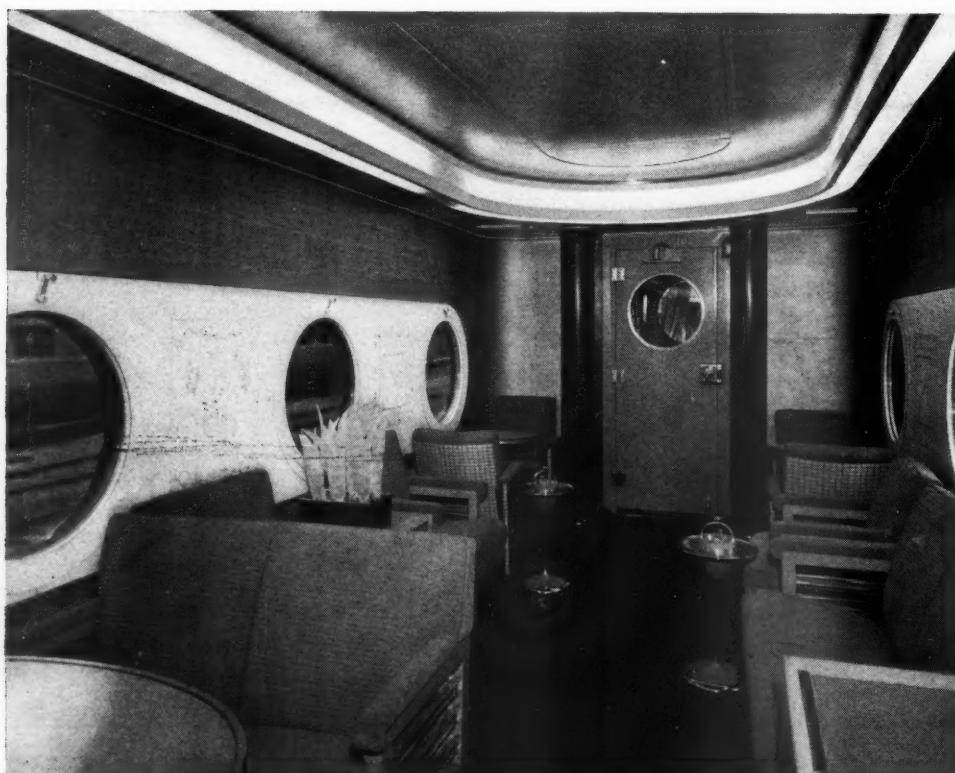
of the single six-wheel truck under the articulated connection which weighs 32,350 lb. The car-body weights range from 77,600 lb. for the baggage-dormitory car to 91,250 lb. for the diner, the total weights of these two cars being 119,700 lb. and 133,500 lb. respectively. Weights for the articulated diner on the City of San Francisco are given in the table.

Construction Compared with Previous Trains

A general specification comparison of the new aluminum-alloy cars with those previously built shows the following outstanding differences. The new cars are constructed to meet fully all requirements as set forth in the A. A. R. specifications for the construction of new passenger equipment cars, dated March 24, 1939.

All underneath equipment in the new cars is enclosed in Monel metal shrouds or bottom enclosures. The shrouds are designed with removable doors for access in servicing equipment. Such shrouding was not provided on the previous cars.

Louvered skirts projecting below the side sills have been applied between the trucks. These are so designed and applied as to act with the shrouding to deflect downward the air currents created under the cars. The pre-



Striking Interior Decorations and Furnishings in the Club Car "Hollywood"

A Corner of the Dining Room—
"City of San Francisco"



vious cars had skirts, but they were not louvered. The louvered skirts are made up in short sections 7 ft. to 8 ft. long, hinged in place so as to be readily removable when it is necessary to open the service doors of the shrouding.

The rivets used on the car exteriors are countersunk and flush with the sides, instead of the button-head type on previous cars. The exterior appearance of these cars has been enhanced by the use of full-car-length anodized aluminum snap-on moldings. One molding is applied directly above the windows, and another at the belt rail immediately below the windows. Previous cars do not have such moldings.

The exterior paint colors are yellow from eave to side sill, harbor-mist gray for the roof above the eaves and for the skirting below the side sill, with bright red striping. Previous cars are in yellow and brown, with red striping.

The end sill and draft-gear-sill construction is now a built-up, welded design, obviating the need for castings, as in previous cars. Underframe sills and cross-bearers

have been redesigned and so applied as to facilitate the installation of all the underneath equipment within the shroud. Cars are self-contained as to air-conditioning and lighting, with inter-communicating telephone systems and electric heat in addition to the conventional steam heat. The Vapor Zone thermostatically controlled steam heating equipment is installed in the coach compartments, dining room and lounge rooms. This feature was developed since the previous cars were built.

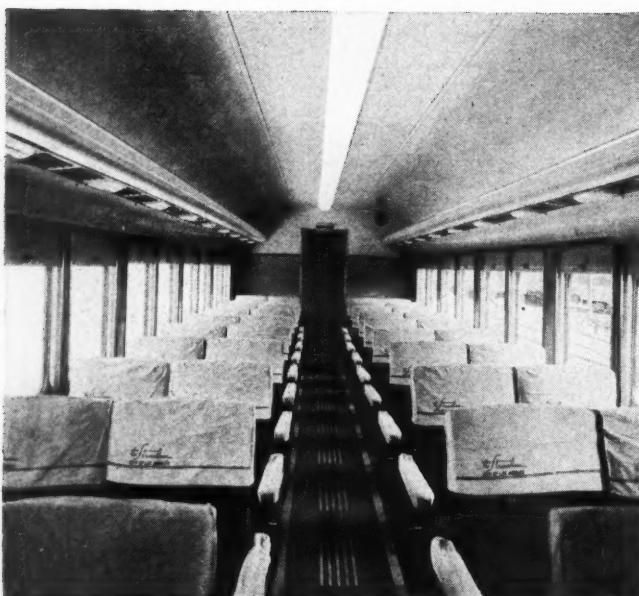
The air-brake equipment is the H. S. C. high-speed electro-pneumatic type, with a speed-governor control and appurtenances on each car. Previous equipment is H. S. C. type employing Decelakron retardation control in the locomotive cab.

Each car has its own electrical power plant consisting of a 7½-kw. Waukesha engine-driven generator unit, burning propane gas, and a storage battery. Cars of the former trains are supplied with electric power from a Diesel-electric power plant in the auxiliary baggage-dormitory car.

Air-conditioning equipment on each car includes a



The Articulated Dining Car for the "City of San Francisco"



One of the Chair Cars in the "City of Los Angeles"

Waukesha propane-gas engine driving a direct-connected 2-kw. generator and a 7½-ton rotary compressor. Low overall height is maintained by the use of the rotary compressor and an engine having the spark plugs and water connection mounted on the sides of the head. The generator supplies power for two fan motors in the condenser unit.

The former cars have motor-driven compressors which take electric power from the head-end power plant. The main wires and cables are located in a water-tight trough on top of the car roofs, instead of being applied between the sub floor and the floor, as on the previous cars.

The capacity of the air-conditioning equipment is such that the temperature conditions inside the cars can be maintained at 76 deg. F. with dry bulb with 63 deg. F. wet bulb when the corresponding outside temperatures are either 120 deg. F. and 70 deg. F. or 110 deg. F. and 80 deg. F. The quantity of fresh air per car is calculated on the basis of 10 cu. ft. per min. per person carried, or not less than 600 cu. ft. per min. for any type of car.

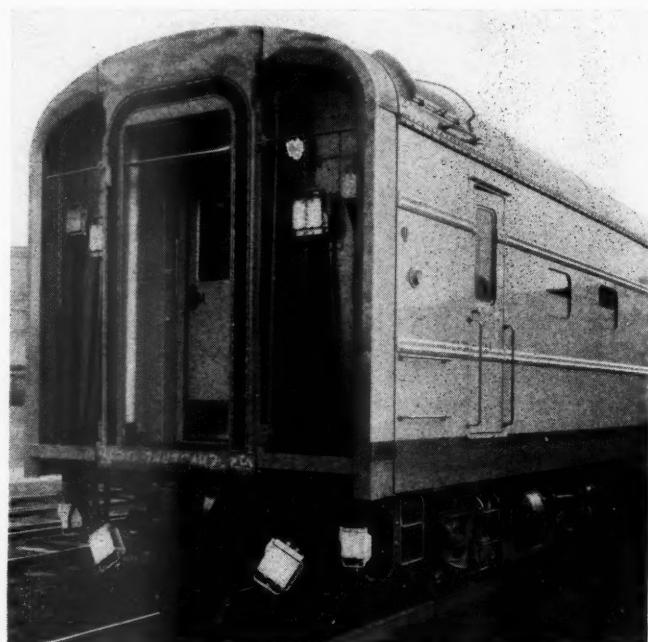
The Waukesha air-cooling system includes condensers, evaporators, combination dehydrator filters, heat exchangers, expansion valves, controls and all necessary parts, each set being mounted on rubber vibration dampeners in a unit arranged to be easily withdrawn from underneath the car for inspection and repairs without

disturbing fuel, water, Freon refrigerant or electrical connections.

The overhead air ducts are made of aluminum coated on the outside with Dednox $\frac{1}{8}$ in. thick; the air outlets are aluminum Multi-Vent panels, hinged so that the entire bottom sheets of the duct may be dropped for easy cleaning. Separate filters are installed for fresh and recirculated air, the former also having a secondary filter to clean this air thoroughly before it is mixed with the recirculated air.

Fluorescent lighting in attractive fixtures of special design are installed in club and lounge cars, diners and chair cars. The former cars have Lumiline and Mazda incandescent lamps.

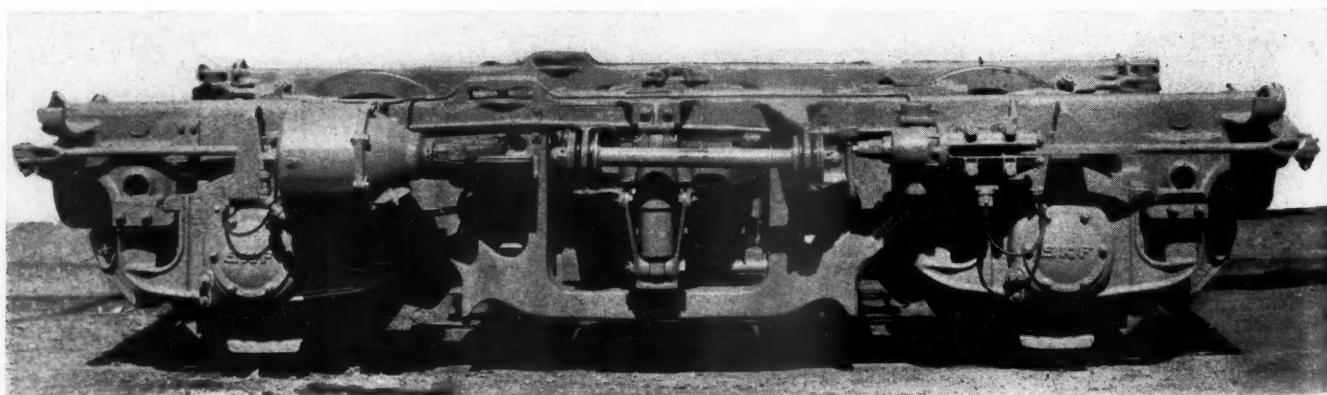
In addition to the radio reception utilized in the former trains, each chair car in the new trains is equipped with 10 radio pillow-type speakers, embedded in a sponge rubber pad, which can be placed against the head, allow-



The Tight-Lock Coupler, and Electric, Steam and Air Connections Between Cars

ing only the user to hear. Receptacles are available at each seat for plugging in, when desired. The hardware throughout the new trains is of nickel-bronze, natural-finish.

In the two club cars, Precipitron filter units are located



One of the Four-Wheel Trucks

in the main air duct. This unit is an electrical device, consisting of highly charged plates which electrostatically remove all dust passing through it and also a high percentage of the bacteria. A new type of bacteria-destroying lamp, emitting ultra-violet rays, is installed in the provision chambers of all refrigerators.

For the dining cars, an electro-pneumatic door opener and closer, operating in conjunction with the end-door lock, is installed. With this device a gentle push or pull causes the door to open or close by air pressure.



Women's Lounge in One of the Chair Cars

The trucks are of the same general type but have been improved over those applied to the earlier trains, primarily by a more effective spring arrangement and the use of wide pedestal wing-type journal boxes with rubber cushioned restraining rods and a derailment safety guide incorporated in the design. General Steel Castings truck frames and bolster are used, also stabilizing rods, rubber-cushioned pedestal liners, insulated center plates, bolster locking device and Drews spring-type side bearings. The 36½-in. rolled-steel wheels have machine-finish treads and machined front and back rim faces.

Each of the roller-bearing journal boxes is equipped with a thermal-type heat indicator, electrically connected to a common relay for operating special audible and visible signals and the train air signal valve in each car.

Light Weights of Typical Individual Cars in One of the New Aluminum-Alloy Trains, the City of Los Angeles

Type of car	Plan number	Weight of trucks, lb.	Car body weight, lb.	Total car weight, lb.
Bagg.-dorm	7443	42,100	77,600	119,700
Chair	7444	42,570	80,930	123,500
Chair	7445	42,600	80,400	123,000
Cafe-lounge	7446	42,200	90,300	132,500
Diner	7447	42,250	91,250	133,500
Club car	7451-A	42,100	87,500	129,600
Artic. diner*	7448-9	75,750	153,910	229,660†

* City of San Francisco.

† Includes two articulated car bodies, two four-wheel trucks, and one six-wheel truck weighing 32,350 lb.

Truck clasp-brake equipment is of the Simplex unit-cylinder type with anti-rattling device. High-tensile steel brake levers are installed, also Ex-Cell-O case-hardened-and-ground brake pins and bushings. The brake shoes are the straight-face type, 9 in. long, four per wheel.

From the point of view of maximum passenger appeal, the architectural and decorative treatment of these two new trains, both exterior and interior, leave little to be desired. As specified by the Pullman-Standard Color and Design Department or, in the case of Car Hollywood, by Walt Kuhn, New York, and by Mandel Bros., Chicago, unusual color combinations are notable for the

Partial List of Materials and Equipment on the Cars of the New City of Los Angeles and City of San Francisco

Aluminum shapes and sheets	Aluminum Company of America, Pittsburgh, Pa.
Truck castings	General Steel Castings Corporation, Granite City, Ill.
Brake shoes	American Brake Shoe & Foundry Co., New York
Simplex clasp brakes	American Steel Foundries, Chicago
Brake pins and bushings	Ex-Cell-O Corporation, Detroit, Mich.
Rolled steel wheels	Bethlehem Steel Company, Bethlehem, Pa.
	Carnegie-Illinois Steel Corporation, Pittsburgh, Pa.
Roller bearings	SKF Industries, Inc., Philadelphia, Pa.
Axes	The Timken Roller Bearing Company, Canton, Ohio
Side bearings	Carnegie-Illinois Steel Corporation, Pittsburgh, Pa.
Truck springs	American Steel Foundries, Chicago
Shock absorbers	American Locomotive Company, New York
Tightlock car couplers	Monroe Auto Equipment Company, Monroe, Mich.
Draft gear	National Malleable & Steel Castings Co., Cleveland, Ohio
Diaphragms:	Waugh Equipment Company, New York
Inside	Adams & Westlake Co., Elkhart, Ind.
Outside	United States Rubber Products Company, New York
Insulation	Gustin-Bacon Manufacturing Company, Kansas City, Mo.
Sash, dehydrated	Johns-Manville, New York
Polaroid (1 car)	Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Heating specialties	Luminator Inc., Chicago
Pipe covering	Vapor Car Heating Company, Chicago
Water tanks	Johns-Manville, Chicago
Hoppers	Steel Sales Corporation, Chicago
Vitreous washstands	Duner Company, Chicago
	Crane Company, Chicago
Air brake specialties	Standard Sanitary Manufacturing Company, Chicago
Pneumatic door closer	Westinghouse Air Brake Company, Pittsburgh, Pa.
Push-Pull end door locks	New York Air Brake Company, New York
Engine-generator unit	National Pneumatic Company, Rahway, N. J.
Generator and lamp regulators	The Dayton Company, Dayton, Ohio
	Waukesha Motor Company, Waukesha, Wis.
Electric storage batteries	Safety Car Heating & Lighting Co., New Haven, Conn.
Charging plug receptacles; train-line receptacles	Electric Storage Battery Company, Philadelphia, Pa.
Motor alternator	Pyle National Company, Chicago
Lighting fixtures	Safety Car Heating & Lighting Co., New Haven, Conn.
Telephone equipment	Luminator Inc., Chicago
	Pyle National Company, Chicago
	Safety Car Heating & Lighting Co., New Haven, Conn.
	Automatic Electric Sales Company, Chicago



The Club Car of the "City of San Francisco"

Corkboard for flooring	Armstrong Cork Company, Lancaster, Pa.
Ice engine for air-conditioning equipment	Waukesha Motor Company, Waukesha, Wis.
Precipitron filter units	Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Multi-vent air delivery panels	Pyle National Company, Chicago
Metal-covered plywood	Haskelite Manufacturing Corporation, Chicago
Window curtain fixtures	Adams & Westlake Co., Elkhart, Ind.
Window-shade material	The Pantasote Company, New York
Twin seats in chair cars	Coach & Car Equipment Co., Chicago
Lounge settees and chairs	General Fireproofing Company, Youngstown, Ohio
Seat coverings	Cleveland Tanning Company, Cleveland, Ohio
Bars	L. C. Chase & Co., New York
Formica (bar and table tops)	Collins & Aikman Corp., New York
Interior furnishing, car Hollywood	Constant-Hopkins Company, Chicago Eagle Ottawa Leather Company, Grand Haven, Mich. Massachusetts Mohair Company, Lowell, Mass. Brunswick-Balke-Collender Company, Muskegon, Mich. The Formica Insulation Company, Cincinnati, Ohio Mandel Brothers, Chicago

contrast of strong colors rather than subtle shades and blendings. Fluorescent lighting is carried around four sides of the dining and lounge rooms to suggest roominess. Mirrors are used extensively on the frieze and bulkhead panels, also give an impression of spaciousness by means of reflection.

In the car Hollywood, distinctly unique effects are

secured. Plastics and synthetics have been used exclusively for decoration and appointments. Wall panels are constructed of Formica. The windows are of Polaroid glass and by simply turning a knob, passengers can eliminate glaring sunlight without shutting off the view. Two synthetic products, Nylon and Saran, are used for furniture upholstery and coverings. Decorative plants are fabricated from Lucite.

A typical color scheme is that selected for the articulated kitchen-dining car in the City of San Francisco. The basic color scheme for this car is burgundy, blue, coral and gray. The carpeting is in burgundy, with the dining chairs in gray-blue leather, draperies and window shades in coral, gray and blue, with the pattern applied horizontally.

The wall treatment has frieze panels of gray, pier panels finished in a light coral tone, and wainscoting of dark gray. Photomurals are used on the bulkheads at either end of the room, one pair of murals depicting the Golden Gate Bridge and the other pair showing the San Francisco-Oakland Bay Bridge. The photomurals are done in special coral tones, hand colored to match with the tones of coral used in the draperies and window shades. Ceilings are pale coral tone, repeating the tones of the furnishings.

I. C. C. Would Regulate Truck Sizes and Weights

WASHINGTON, D. C.

FEDERAL regulation of sizes and weights of motor vehicles, which "should be confined within comparatively narrow limits and be resorted to only in particular cases and upon clear proof that an unreasonable obstruction to interstate commerce exists," has been recommended by the Interstate Commerce Commission in a report which went to Congress on August 14. Commissioner Splawn dissented, being unconvinced that "Congress should undertake to occupy this field because states have enacted laws which may appear on the surface to be restrictive of some interstate operations."

The report is in Ex Parte No. MC-15, the proceeding instituted in November, 1937, for the purpose of carrying out the Congressional mandate to make an investigation of the need for federal regulation of sizes and weights of motor vehicles. The original mandate came in the Motor Carrier Act, 1935, but the anxious truck and highway interests had inserted in the Transportation Act of 1940 a provision directing the commission to expedite the matter. And recently Senator McNary, Republican of Oregon, introduced a resolution which would have called upon the Senate committee on interstate commerce to make a like study. "Owing to the complex and controversial character of the subject," the commission's report said, "we have deemed it necessary to undertake a large task of fact-finding."

Seeks Veto Power Over State Laws

Specifically, the commission recommends that it be given authority to fix size and weight standards "as need arises" under a set-up which would provide for "the entertaining and disposition of complaints against a state or political sub-division thereof, attacking its limitations as they apply generally or to a particular location." In the exercise of such power the commission asks that it be authorized "to obtain a technical report from the Public

Roads Administration, the federal agency most concerned with road matters, and from the highway department of the state concerned"; and that it be authorized "to give these reports appropriate consideration." Also, "opportunity should be provided for public hearings"; while "provision should be made for prompt and orderly modification of any limitation that we may prescribe on recommendation of the Public Roads Administration and the affected state that conditions of an emergency character require temporary modifications in the sizes and weights otherwise allowed."

If federal regulation be thus entered upon, it should, as the commission put it, "be administered in the light of the broad statement of national transportation policy declared in the Transportation Act of 1940"; and enforcement "should, to the extent possible, be concurrently conducted by federal and state agencies."

National Uniformity Impracticable

The commission based its finding of need for federal regulation on "the broad public interest in the securing of as economical and efficient a motor transport service as possible," and "the requirements of national defense." It recognized that "states of certain regions have shown a tendency to bring their regulations into closer accord," and that "this tendency has been marked in the recent past"; but it nevertheless called that process a "slow one" embodying no assurance "that it will be carried to the extent the public interest requires." Moreover, "burdens on interstate commerce can not be relieved through the judicial process; only legislation can afford the needed relief." Meanwhile, the report also found that "for the most part national uniformity of standards is impracticable"; and that "considerations of safety and convenience do not, in and of themselves, require that Congress enter this field of regulation." However, if

federal regulation be undertaken, "there will be need for consideration of certain phases of sizes and weights in their relation to the safety and convenience of users of the highways."

Leading up to the foregoing conclusions and recommendations, the commission found evidence of "wide and inconsistent variations" in state limitations, the variations being "particularly marked in the limitations which relate to length and weight." The limitations imposed by a single state, the report went on, "may and often do have an influence and effect which extend, so far as interstate commerce is concerned, far beyond the borders of that state, nullifying or impairing the effectiveness of the more liberal limitations imposed by neighboring states." With respect to public highways which serve as the principal arteries of commerce, "state limitations may be and to a considerable extent probably are less liberal than is necessary for the proper protection of the highways and their appurtenances and of the public safety." And "where such conditions exist, the limitations operate as an obstacle to the flow of interstate commerce, render motor transportation more costly, and result in an impairment of service to the public."

Truckers Supported by Federal Departments

Federal intervention was found, in general, to be desired by the for-hire motor carriers and by the War Department, Department of Agriculture, and the Public Roads Administration of the federal government, and "to a lesser extent by private motor carriers." The opinion of the shipping public "tends to favor such intervention or to be neutral," while the opposition comes "first and foremost, from the railroads and, secondly, from the states." A single individual showed an interest in the problem "from the viewpoint of a private car owner and taxpayer." With respect to the power of Congress, the commission rejected the contention of the railroads that federal regulation would prove unconstitutional, holding that Congress "has plenary power to remove unreasonable obstructions to interstate commerce." Moreover, the report also concluded "that under a broad policy seeking to preserve essential forms of transportation, such as those by railroad and water, as well as by motor truck, or to promote safety in highway use, Congress could establish size and weight limits for motor vehicles, applicable to interstate traffic, lower than those now applicable to such traffic under state laws."

The commission's report was a document of 45 mimeographed sheets, and it was accompanied by a more voluminous staff report prepared under the direction of C. S. Morgan, assistant director of the Bureau of Motor Carriers. In accordance with the assignment's terms of reference, the commission availed itself of the "helpful assistance" of the Public Roads Administration, and "of other federal departments." About a third of the states filed statements, and three statements were filed by representatives of groups of states. All of these except "three and possibly four" states definitely opposed the entry of the federal government into the field. Such opposition was based generally on fears that the result would be increased limits, although Idaho feared that existing Western limits would be reduced. "Kentucky, and less vigorously, certain other states deny the lawfulness of federal entry into this field"; while West Virginia took the position in effect that if uniformity of standards is desired, the federal government should assume the responsibility for the construction and maintenance of roadways adequate to the standard adopted." Other states expressed the view "that they are under

no legal or moral obligation to provide roads adequate to handle larger or heavier vehicles than are now allowed."

Effect of Limitations on Truck Payloads

After setting forth the foregoing and briefing in like fashion the positions of other parties in interest, the commission summarized the characteristics of existing limitations. Here reference is made to a table in the staff report which indicates "that the approximate maximum payload a tractor-semitrailer, commonly used in intercity operations, may carry is lowest in Kentucky (10,700 lb.), is 17,800 lb. in Tennessee, Mississippi, Alabama and South Dakota, is 23,700 lb. in 16 states, and from 20,700 to 35,500 lb. in the remaining states." Later on there is a listing of the states whose limitations were subjected to the most criticism. They are: Pennsylvania, Delaware, Kentucky, Tennessee, Indiana, Illinois, South Dakota, Iowa, Texas and Oregon. However, "subsequent changes have liberalized the regulations of certain of these states." Increases in length and weight limitations were found to be most generally desired; interest in securing changes in width limitations "was almost lacking," while "there was some but not a large interest in securing more liberal allowances as to height."

Discussing the problem in its relation to economics of motor transportation, the commission found the views of the motor carriers "a good point of departure." About half of the for-hire carriers, operating more than half of the 15,000 for hire trucks or combinations covered in the survey, indicated that state laws affect their selection and utilization of equipment. "Lower costs and ability to render better service," were among the benefits which the carriers expected from more liberal limitations. The bulk of all vehicles in every type of service which are restricted "probably are restricted only occasionally," the commission pointed out, adding, however, that "the predominant number of regularly restricted vehicles are in the relatively long-haul field and consist of vehicles of for-hire and private carriers engaged largely in a transportation function directly competitive with rail transportation." Thus, "the number of vehicles regularly affected by existing limitations is on the whole relatively small, but these vehicles are far more important in terms of the service they render."

In its consideration of highway facilities and their relation to federal regulation of vehicles sizes and weights, the commission notes that "the greater volumes of total traffic and the highest percentages of heavy commercial vehicles are preponderantly found on the more highly improved roads . . . the heaviest loads of a high degree of frequency therefore are found where they do the least harm." Another "important consideration" in the view of the commission "is the fact, widely accepted by highway engineers, that it is not the gross weight of the vehicle that determines whether or not it overtaxes a pavement facility but its wheel load." Moreover, "on the whole, there is no fixed relation between the maximum wheel load allowed by a given state and the thickness of its pavements." And it is not necessarily a proper assumption that federal regulations, if promulgated, "would apply to all roads from the best to the lowliest." In other words, "there are weak roads and weak bridges which require protection from heavy loads, but there are also arteries of interstate traffic which have been improved to standards beyond those recognized in the fixing of certain state size and weight limits. Federal regulation, if undertaken, obviously should reflect these differences in conditions."



Seven Years of

The First Installation
of Continuous Rails
on the D. & H. at
Albany, N. Y., Made
in 1933, Involved
Lengths Up to 2700
Feet

SEVEN years have now elapsed since the first section of continuous butt-welded rail in long lengths was installed on the Delaware & Hudson, and during this period the performance of the continuous rail has been kept under close observation. In fact, for some time we have been keeping records on two test sections, each involving a length of track laid with continuous rail and a section of track embodying standard jointed construction, and comparable figures giving maintenance costs are now available. While not conclusive, these figures are worthy of careful study.

History of Butt-Welding

However, before discussing the results to date of these test sections it may be well to trace briefly the introduction and development of the practice of butt-welding rails into long lengths for installation in open track. The pioneer in the development of such track was the late H. S. Clarke, who was engineer maintenance of way of the Delaware & Hudson at the time of his death in 1938. Mr. Clarke made his first installation of butt-welded rail in 1933. It is true that, prior to this time, short stretches of butt-welded rail had been installed in tunnels on steam railroads and on fully-ballasted trolley lines, but there were no installations of long continuous lengths in open track. The butt-welding of rails had been practiced extensively in Germany, Hungary, Egypt and Australia for many years but, to my knowledge, the lengths of such rails have been limited generally to a maximum of 225 ft.

But what has happened since Mr. Clarke made his first installation in August, 1933? More than 40 separate installations have been made in this country under various track conditions on 12 different and widely separated railroads. Of these installations, 12 are lo-

cated on the Delaware & Hudson. These 12 installations comprise a total of 446,024 lin. ft. of rail and 10,984 butt-welded joints.

Advantages

About six years ago, Mr. Clarke prepared a paper, entitled *Elimination of the Rail Joint by Butt-Welding*, which was presented before this club by the present speaker. At that time the first installation of continuous butt-welded rail had been in service about a year and a half. Regarding the advantages and disadvantages of butt-welded rail Mr. Clarke had the following to say:

There are many advantages in favor of indefinitely long rails in lengths to be limited only by necessary breaks for signal circuits and switches. These advantages may be listed as follows:

- (1) The lower cost of track maintenance, particularly at the joints.
- (2) Longer life of the rail, resulting from the elimination of joint batter.
- (3) Savings in rail-laying expense owing to the increased life of rail.
- (4) Better conductivity in track circuits.
- (5) Elimination of the necessity of bonding joints.
- (6) Savings in the maintenance of rolling stock and motive power.
- (7) Smoother riding track resulting from the elimination of pounding at the joints.
- (8) Lower cost of maintaining alignment and surface, owing to the elimination of creepage and its effects.

In fact, the advantages of welded track are so many and far reaching that we cannot afford to overlook them when, as at present, economies in maintenance are so necessary, while, at the same time, improved track conditions are essential.

There are objections to the use of indefinitely long rails that will come to mind; some of these could, no doubt, be stated as follows:

- (1) Necessity of removing all rails in a given heat if an excessive number of transverse fissures should develop in that heat.

* Based on a paper presented before the Metropolitan Maintenance of Way Club of New York.

Continuous Welded Rail on the Delaware & Hudson*

A review of experience to date—Test sections involving both butt-welded and jointed track give comparative unit figures on maintenance costs

By P. O. Ferris

Chief Engineer, Delaware & Hudson, Albany, N. Y.

(2) Necessity of removing broken and defective rails.
(3) Problems presented in the handling of continuous rail that has been released.

Essential information regarding the 12 installations of butt-welded rail on the D. & H. is given in Table I. This table gives the location of each installation, and, for each location, the number of welds of the different types, the length of the welded rail, the type of ballast, the year the rail was laid, the track involved, the weight of the heaviest drivers and the maximum speed of trains over the welded rail, and the total tonnage to which the welded rail has been subjected. All of the installations were made with 131-lb. R. E. rail except that at Albany, which involves 130-lb. R. E. rail. Among the 12 installations,

(1) Improper design and lack of accurate control of the pre-heating temperature. Failures of this type have all occurred in the installations made in 1933, 1934 and 1935, and their cause has been eliminated by improvements in the design of the weld and by accurate control of the pre-heating temperature.

(2) Man failures due to improper welding technique. These, I believe, are attributed to excessive pre-heating at the time of welding.

(3) Failures that were due to defects already present in the rail at the time of welding.

(4) Failures due to the use of an improper type of thermit. In other words, a type of thermit was used

Table I
Data on Installation of Butt-Welded Rail
Delaware & Hudson

Location†	No. of welds	Lin. feet of welded rail	Type of ballast	Year laid	Heaviest drivers (lb.)	Max. speed m. p. h.	Total tonnage to date
	Thermit	Flash	Thermit	Flash			
Albany	316	...	12,075	...	cr. stone	1933	51,554,655
Mechanicville	254	...	10,071	...	" "	32,083 }	44,921,625
Schenectady	551	70	18,218	5,356	" "	34,425 }	20,853,456
Windsor	281	...	19,286	...	" "	34,425 }	19,940,089
Cohoes	74	...	3,035	...	" "	1935	52,710,774
Comstock	409	...	16,044	...	" "	34,425 }	56,382,984
Schenectady	1,559	874	62,010	34,900	" "	34,425 }	33,013,265
Pt. Henry	98*	1,987	...	82,527	ore sand	1937	15,011,649
Harpursville	65*	1,142	...	51,370	cinders	Single	14,510,844
Bainbridge	47*	513	...	21,120	cinders	32,083 }	22,338,477
Watervliet	53*	1,622	...	66,487	stone &	34,425 }	31,306,892
Plattsburgh .....	...	1,069	...	43,523	cinders	60	41,511,432
Totals	3,707	7,277	140,740	305,284	ore sand	34,425 }	25,454,607
						65	10,007,766
						65	9,673,950
						65	5,232,850
						65	4,549,700

(combined length 446,024) lin. ft.

* Closure welds only.

† All the locations given are in New York State.

the longest continuous stretch of rail that is uninterrupted by angle-barred joints is 7,018 ft. in length.

Failures and Their Causes

Of the 10,984 welded joints, there have been only 29 failures, of which 25 occurred in thermit welds and 4 in flash welds. The number of failures represents less than 0.26 per cent of the welded joints. The failures that have been experienced in thermit welds fall roughly into four classes as follows:

which did not develop sufficient heat to effect a full and complete head weld.

Failures that have occurred in flash welds fall into three groups as follows:

(1) Those caused by the presence of zinc in the weld. These failures resulted from the use of galvanized iron shims for alining the rail ends at the time of welding. The use of these shims has been discontinued.

(2) Failure caused by burned spots on the edge of the rail base. This burned spot was formed as a result of arcing between the rail and the contact in the welding



Unloading Long Welded Rails From Flat Cars on the D. & H. in 1937. The Rails Were Pulled Off, One at a Time, as the Train Moved Out From Under Them

machine at the time of welding. The condition causing it has been corrected.

(3) Failure due to a flaw that was present in the rail at the time of welding.

Most of the failures have occurred in thermit welds and it is quite natural that this should be true. The pioneering was started with thermit welds on an experimental basis, not only to determine if the butt welding of rails in long lengths was practicable, but also to determine the requirements of a practicable and satisfactory welded joint. The installation that was made in 1933 at Albany apparently was convincing insofar as it indicated the feasibility of welding rails into long lengths, but neither we nor the Metal & Thermit Corporation were entirely satisfied with the joints obtained.

Improvements in Thermit Welds

The first joint embodied a thermit collar, two inches wide, welded to the base and web of the rail and extending to within about $\frac{1}{4}$ in. of the underside of the rail head, the latter being pressure welded. This type of weld was undesirable in that the thermit metal frequently washed the web and underside of the head of the rail and had a tendency to pull down the joint in cooling. In making welds at Mechanicville, N. Y., in 1934, an attempt was made to overcome these objections by the use of a collar four inches (instead of two inches) wide to prevent the pulling down of the joint; also a metal strip was placed in the mold at the top of the web to prevent the washing effect. The four-inch collar was effective in preventing the pulling down of the joint but the metal strip did not prove satisfactory in preventing the washing.

In 1935, further changes were made in the design of thermit welds. The four-inch collar was continued but the use of the metal strip was eliminated. Also, the heights to which the thermit metal was permitted to rise on the web of the rail were reduced so that the upper limit of this metal was $\frac{1}{2}$ in. to $\frac{3}{4}$ in. from the underside of the rail head. This resulted in a considerable reduction in the amount of washing occurring on the web of the rail and produced a weld with a much cleaner appearance. In the following year (1936) the welds that were made embodied these improvements, which were augmented by the use, for the first time,

of an optical pyrometer for determining the pre-heating temperature more accurately. These welds proved most successful. No failures have been experienced in the welds that were made that year.

The Metal & Thermit Corporation was still not satisfied, and in 1937 it made a further change which apparently resulted in a much improved design. This design consisted of a thermit collar that not only covered the base and web of the rail but also included the underside of the head. The head proper, of course, was pressure welded as in all previous designs. Pre-heat temperatures were determined by the optical pyrometer, as had been done in 1936. This design is called the "K" type weld, and appears to be entirely satisfactory, no failures having been discovered that are attributable to it.

It is to be noted that, up to the present time, welded joints have been holding up exceptionally well, even though the earlier types were made in accordance with an improper design, and welding technique was more or less in the experimental stage. Although we have inspected our welded rail annually with Sperry detector machines we have yet to find a fissure in this type of rail.

Failures of Bolted Joints

In addition to failures in the welds themselves, we have experienced failures of bolted joints that were in-



Some of the Rails Welded in 1937 Were Stored on a Ground-Level Storage Bed as Welded, and Were Subsequently Pulled Onto Flat Cars for Movement to Points of Installation

stalled to join welded sections to each other or to connect a welded section with standard jointed rail. These failures usually consist of sheared bolts and are attributable to the temperature conditions that prevailed when the rail was laid and to inaccuracies in bolt-hole drilling. For example, some holes were so drilled that the entire stress fell on only one, or perhaps two, of the bolts of a four-hole bar. The replacement of the four-hole bars with six-hole bars and the use of accurately-drilled rail have eliminated this type of failure. When a failure occurs in butt-welded rail it is a simple matter to cut out a section of rail that includes the failed joint and insert a piece of rail of equivalent length, which is jointed to the adjacent sections.

Let us refer again to the advantages which Mr. Clarke attributed to long butt-welded stretches of rail. We know that the track circuits in such rail have better conductivity, that the necessity for bonding joints is eliminated, and that welded track is smoother and quieter.

However, the question of the economy of such track cannot be answered so readily.

Factors Affecting Costs

It must be considered that, when we first began making butt-welding installations, the D. & H., like most other roads, was of necessity undergoing radical changes from a maintenance standpoint. Expenses were being curtailed wherever possible; forces had been reduced and sections had been lengthened considerably. Also, with the object of producing more permanent track and thus reducing maintenance expenses, the weight of rail had been increased from 90 lb. to 130 lb. and 131 lb.; large tie plates had been introduced, which were lagged to the ties independently of the rail; spring clips were being used as the rail fastenings; and stone ballast was being installed as financial conditions would permit. As a result, in the last ten-year period our maintenance expenses have been cut practically in half.

Because of these changes, it was impossible to say what economies, if any, were attributable to welded construction. This led us to the establishment of test sections for the purpose of determining the economies of jointed track as compared with welded track. As stated previously, we have two such sections under observation at the present time, in each of which the welded and jointed track embody physical conditions that are as nearly identical as it was possible for us to make them without extra

expense. One section comprises 11.2 miles of 131-lb. welded construction and 11.2 miles of 130-lb. jointed construction, with identical fastenings and stone ballast. The other comprises 7.9 miles of welded construction and 17 miles of jointed construction, with identical fastenings and cinder ballast. Careful records are kept of the maintenance expenditures on each test section, from which we are able to show the man-hours expended per year per mile for each item of track maintenance for the two different types of construction.

Test Results

Data that have become available to date on the test sections are given in Tables II and III, that in the former table applying to a test section located in the vicinity of Port Henry, N. Y., and that in the latter table covering a test section near Schenectady, N. Y. It should be mentioned that in both test sections the jointed track is laid with 130-lb. rail and the welded track with 131-lb. rail. Also, it will be noted that the total tonnage that has been carried by the jointed sections is, in each case, considerably more than that over the welded track. Moreover, considerable tonnage had already been carried by the jointed sections at the time the tests were undertaken.

The test section near Port Henry is the better of the two in that, since this test is located in single-track territory, with the two types of construction adjoining each

Table II
Comparative Maintenance Costs—Continuously-Welded Rail vs. Angle-Barred Rail

Maintenance items	Total man-hours		Man-hours per track-mile					
	Angle barred rail	Welded rail	Angle-barred track			Welded track		
			24 Mos.	Per year	Per year per MGT	24 Mos.	Per year	Per year per MGT
Patrolling and inspection	67	33	3.94	1.97	0.23	4.18	2.09	0.25
Lining and surfacing	5,576	1,866	328	164	19.30	236.20	118.10	13.89
Gaging	1,070	4½	62.94	31.47	3.70	0.57	0.28	0.03
Tightening angle bar bolts	434	41	25.52	12.76	1.50	5.20	2.60	0.31
Renewing insulated joints	53	119½	3.11	1.55	0.18	15.12	7.56	0.89
Renewing bolts and clips	65	84½	3.82	1.91	0.22	10.70	5.35	0.63
Tightening bolts and clips	166	379½	9.76	4.88	0.57	48.00	24.00	2.82
Bucking rail account of expansion	...	40	...	...	...	5.06	2.53	0.30
Replacing account expansion	...	75	...	...	...	9.50	4.75	0.56
Applying M & L clips	4	9	0.2	0.1	0.01	1.14	0.57	0.07
Totals	7,435	2,652	437.29	218.64	25.71	335.67	167.83	19.75

Table III
Comparative Maintenance Costs—Continuously-Welded Rail vs. Angle-Barred Rail

Maintenance items	Total man-hours		Man-hours per track-mile					
	Angle barred rail	Welded rail	Angle-barred track			Welded track		
			35 Mos.	Per year	Per year per MGT	35 Mos.	Per year	Per year per MGT
Patrolling and inspection	3,230½	2,308½	288.4	98.9	6.82	206.1	70.5	7.83
Lining and surfacing	12,682	3,455	1,132.0	388.1	26.76	308.0	105.6	11.73
Gaging	15	...	1.3	0.4	0.03	...	...	...
Tightening angle bar bolts	456	...	40.7	13.9	0.96	53.6	18.4	2.04
Tightening M & L clip bolts	455	600	40.6	13.9	0.96	2.6	0.9	0.10
Tightening screw spikes	100	29	8.9	3.1	0.22	0.3	0.1	0.01
Shimming	73	4	6.5	2.2	0.15	...	...	...
Checking expansion	16	...	1.4	0.5	0.03	...	...	...
Applying angle bars	130	...	11.6	3.9	0.27	10.0	3.3	0.37
Changing ties	40	112	3.6	1.2	0.08	...	...	...
Totals	17,197½	6,508½	1,535.0	526.1	36.28	580.6	198.8	22.08

* Two tonnage figures are shown here for each type of track to indicate the tonnage carried by rail laid at different times. Specifically, for angle-barred track the higher tonnage covers rail laid in 1930, while the lower figure applies to rail laid in 1931. For continuously-welded track the higher figure is for rail laid in 1935, while the lower figure applies to rail laid in 1937.

other, the annual tonnage carried and the speeds of trains operating over the two parts of the section are identical. Although they are not conclusive, the results so far obtained at Port Henry are indicative of what may be expected of welded rail as compared with jointed rail. The tests are to be continued and only time will tell what the final results will be. The data that have become available to date indicate that the forecasts made by Mr. Clarke are correct.

What About Disadvantages?

This discussion of butt-welded rail would not be complete without reference to our experiences with the disadvantages of such rail that were listed by Mr. Clarke. Regarding the first disadvantage—the problem created by the development of transverse fissures—as mentioned previously, we have encountered no fissures in our butt-welded rail. The problem created by the presence of broken or defective rails—the second disadvantage—can be handled in the same manner in which failures in welds are repaired, namely, by the insertion of a section of sound rail jointed to the existing rail.

Regarding the third disadvantage—the problem of handling released butt-welded rail—I hope we will not be confronted with this problem for many years to come, although I do not anticipate any difficulty in solving it. In fact, several years ago we loaded approximately 43,000 lin. ft. of rail in 1400-ft. lengths from a stock pile and transported it on two trains of flat cars to a point 145 miles away, where it was unloaded and installed, thus demonstrating that it is no great problem to load or unload long lengths of rail.

The initial costs of installing butt-welded rails on the D. & H. were high. For instance, we used a large tie

plate with two spring clips per plate. Since the elimination of joints has the effect of eliminating the creeping of the rail, I feel that this amount of holding power is not necessary for, insofar as temperature stresses are concerned, the ends of the welded sections are the only parts of them that need be considered. If the rail is well anchored at the ends, little if any trouble due to changes in temperature should be experienced.

Moreover, since the practice of butt-welding rails has passed the experimental stage, the costs of doing the work have been reduced, and it is possible that they can be lowered still further, especially if the work is done in sufficient quantity. Rails can be butt-welded at advantageous locations and placed in stock piles to be installed as required, which will also have some bearing on the cost.

Railroad Construction Indices for 1940

WASHINGTON, D. C.

THE Engineering Section of the Interstate Commerce Commission's Bureau of Valuation has issued its Railroad Construction Indices for 1940, showing "a definite upward trend in railroad construction costs." Based as usual on the 1910-1914 costs as 100, the 1940 index for the country as a whole was 153—up four points from last year's 149, and 20 points above the 1933 post-war low of 133. The peak was reached in 1920 when the index stood at 226.

In an accompanying notice I. C. C. Secretary Bartel

REGIONS I TO VIII, INCLUSIVE

Tabulation of Indices by Years and by Accounts Applicable to the Entire United States

	*Per Acct. Cent																											
	1913	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40		
ROAD																												
1	2.83	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	
3	18.19	100	110	130	165	190	250	170	143	160	164	149	153	143	135	133	123	118	106	98	100	101	99	103	93	90	90	
4																												
5	1.51	103	109	128	150	183	208	179	165	179	179	179	178	169	155	155	143	130	119	111	122	120	130	139	141	140	149	
6	9.41	105	111	146	162	178	206	165	160	176	173	171	170	168	164	163	150	134	122	122	136	135	141	155	150	149	156	
7	0.04	102	124	169	177	184	210	150	153	173	171	168	165	163	163	162	154	144	129	122	136	136	137	158	150	149	159	
8	5.58	100	100	112	133	170	201	189	157	177	175	172	173	175	176	175	170	155	144	139	149	147	150	159	154	158	164	
9	8.57	101	106	121	148	152	168	158	144	145	145	144	144	144	144	144	144	144	140	134	123	123	124	143	139	136	138	
10	3.39	99	129	198	210	203	209	192	161	182	179	177	177	177	177	170	165	169	165	163	158	150	147	150	169	167	167	
11	4.09	103	107	114	140	150	207	191	176	175	175	174	175	176	176	176	168	159	146	146	141	139	140	143	143	143	143	
12	4.35	100	100	130	163	175	218	174	165	188	188	188	188	188	188	188	182	175	164	157	159	165	169	167	165	165	165	
13	0.51	100	122	142	178	194	204	189	177	179	176	175	175	175	173	171	164	147	135	140	140	138	143	144	139	139	139	
14	0.08	103	108	119	165	199	280	197	194	212	200	201	201	201	204	204	198	188	125	126	140	140	155	155	155	155	155	
15	1.18	104	108	137	161	182	208	171	164	178	175	171	169	166	165	165	161	153	131	127	139	137	139	152	145	142	146	
16	4.42	101	115	135	154	185	215	192	180	194	193	188	184	189	188	187	182	165	141	145	151	151	157	166	166	166	177	
17	0.51	100	115	136	156	185	216	192	178	196	196	189	187	192	191	190	186	166	140	145	150	150	162	162	177			
18	0.82	101	120	159	170	191	213	185	178	187	187	186	182	185	186	184	177	161	147	151	155	156	166	166	172			
19	0.26	101	120	153	160	190	212	181	165	185	185	182	180	183	183	174	159	144	149	154	154	153	159	159	163			
20	2.16	102	118	141	159	188	216	191	180	193	192	188	188	189	189	188	187	176	161	137	142	147	147	155	165	165	176	
21	0.09	100	110	128	150	185	214	190	184	197	197	193	190	195	193	192	183	165	137	142	147	147	156	164	164	166	166	
22	0.04	100	115	135	155	185	210	193	178	198	198	193	193	191	191	184	165	137	142	147	147	154	166	166	176			
23	0.53	100	114	133	152	178	204	167	158	175	175	174	177	178	178	172	158	136	141	146	146	149	153	153	161			
24	0.44	101	117	145	155	184	204	170	159	176	176	174	174	176	176	172	157	136	142	147	147	151	153	153	160			
25	0.01	108	122	148	175	194	213	194	176	188	189	186	185	189	189	189	178	163	145	148	176	178	178	179	188			
26	0.34	103	124	147	158	164	192	191	162	187	179	163	157	163	165	150	138	121	119	124	128	131	135	129	134			
27	1.49	94	106	132	152	165	175	163	158	165	164	162	169	158	155	147	147	138	130	130	136	138	143	143	146			
28	0.01																											
29	0.14	104	122	141	158	189	218	197	184	196	191	186	191	191	189	177	162	138	143	148	148	152	167	167	176			
30	0.01	101	117	137	156	187	218	194	180	197	197	192	188	193	191	190	176	161	137	142	147	147	138	164	164	175		
31	0.03	115	166	190	181	186	176	145	132	142	136	140	141	137	142	150	136	116	98	98	103	105	108	123	110	110	114	
32	0.51	109	148	178	192	189	205	172	163	178	172	175	176	175	178	181	173	148	144	144	148	151	152	155	149	149	155	
33	0.06	106	116	145	169	194	230	208	179	209	203	185	183	198	199	209	200	172	147	147	150	153	148	157	152	152	152	
34	0.01	101	110	119	172	206	250	228	214	220	215	220	216	219	219	217	215	175	175	175	175	180	184	185	185	185		
35	0.04	101	117	137	156	186	217	192	179	195	195	190	186	191	190	189	182	164	141	146	151	151	154	161	161	168		
36	0.03	104	124	153	177	205	217	191	190	191	191	191	190	190	190	190	190	181	156	156	145	145	145	150	150	150	150	150
37	0.08	105	113	127	146	158	170	162	149	151	151	151	151	151	151	149	148	147	144	138	147	147	147	161	153	154	158	
38	0.05	100	100	179	179	184	202	181	170	173	185	190	190	191	191	191	190	160	155	155	150	150	160	170	180	180	180	
39	0.95	115	126	155	192	200	210	198	173	183	185	185	186	187	187	189	191	176	166	155								

REGIONS I TO VIII, INCLUSIVE

Tabulation of Indices by Years and by Accounts
Applicable to the Entire United States

*Per Acct.	Cent	1915	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40		
EQUIPMENT																													
51	5.42	86	102	145	189	202	248	192	179	197	185	171	191	190	179	188	194	184	168	166	176	188	188	201	201	201	215		
52	0.10	100	117	137	184	184	217	197	196	198	199	192	194	202	203	221	221	210	175	165	185	190	190	198	199	190	190		
53	11.22	101	148	183	243	267	284	184	156	200	179	171	163	178	169	185	181	161	144	144	165	177	180	191	190	198	204		
54	2.14	89	104	132	164	197	213	169	152	192	187	183	189	191	180	183	181	178	161	161	173	182	182	195	195	194	200		
55	0.02	89	104	132	164	197	213	169	152	192	187	183	189	191	180	183	181	178	161	161	173	182	182	195	195	194	200		
56	0.48	107	125	164	227	245	239	200	175	170	170	170	170	170	170	170	165	158	148	148	158	160	160	171	171	171	176		
57	0.56	96	128	165	225	244	263	193	168	203	183	188	180	192	184	195	191	178	165	165	177	180	180	197	197	200	208		
58	...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Wtd.																													
Ave.	19.94	96	130	166	219	240	265	185	163	198	182	173	174	183	174	186	185	170	153	169	180	181	195	194	198	206			
51-58																													
GENERAL EXPENDITURES																													
71-75	0.89	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140		
& 77	6.08	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153	144	132	128	132	132	134	143	139	138	141		
76	6.08	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153	144	132	128	132	132	134	143	139	138	141		
Wtd.																													
Ave.	6.97	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153	144	132	128	132	132	134	143	139	138	141		
71-77	6.97	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153	144	132	128	132	132	134	143	139	138	141		
1-46	73.09	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140		
51-58	19.94	96	130	166	219	240	265	185	163	198	182	173	174	183	174	186	185	170	153	169	180	181	195	194	198	206			
71-77	6.97	102	111	135	161	181	216	176	158	172	172	167	167	165	162	161	153	144	132	128	132	132	134	143	139	138	141		
Wtd.																													
Ave.	100	100	115	142	173	193	226	177	159	177	174	168	168	169	164	166	160	149	136	133	140	142	143	153	149	149	153		
1-77	100	100	115	142	173	193	226	177	159	177	174	168	168	169	164	166	160	149	136	133	140	142	143	153	149	149	153		

* The percentages shown are the relationship in dollars of each individual account to the total of Accounts 1 to 77, inclusive, except Account 2—Land, and were arrived at by taking 1910-1914 dollars from the basic engineering reports with varying dates of valuation from 1914 to 1921, inclusive, and adjusting for changes shown by the "Bringing to Date" reports. The "Statistics of Railways" were also examined for changes in recent years.

declared that the indices are "unique in that while other construction indices generally limit coverage to a few items or types or localities, these cover the costs of thousands of items entering into construction costs in an industry that penetrates all parts of the country and draws on all types of materials, supplies, and labor." The record, he further observed, now covers year-by-year, a period of more than a quarter of a century.

Indices Indicate Trends

Furthermore, the compilation's "General Notes" point out that the indices "represent territorial index factors and are of value in indicating trends. They are not necessarily applicable for use in the determination of reproduction costs upon individual railroads . . ." The general indices for the country as a whole (given in the accompanying tabulation) are broken down in the Bureau's compilation into eight regional sets.

In his notice Mr. Bartel called attention to the fact that for the first time since 1920—at 206—the equipment index stood above 200, which is 100 per cent above the 1910-1914 period used as the basic 100 for the index. The maximum for equipment was reached in 1920, when it reached 265, while the low point occurred in 1932-1933 at 153. The 1940 equipment figure is up eight points from 1939.

The road accounts which reached 214 in 1920 and hit a low of 127 in 1933 were up to 140, three points over 1939. The principal increases in the roadway accounts, continued Mr. Bartel's statement, are due to higher prices for steel and timber. Buildings, up about seven per cent, showed the greatest increases.

Only One Account Below Base

In the total of 54 accounts covered by the indices, he concluded, only one has fallen below the 1910-1914 base of 100. That is Account 3—Grading. It was the Secretary's observation that "the art of building a roadbed has been completely mechanized—taken over from mules

and scrapers." This index figure went up to 214 in 1920, but now stands at 90.

The accounts for which the indices are shown are the several primary accounts designated in the Classification of Investment in Road and Equipment of Steam Roads, dated July 1, 1914. These accounts, shown by their numbers in the tabulation, are as follows:

- I—ROAD:
- 1. Engineering
- 3. Grading
- 4. Underground Power Tubes
- 5. Tunnels and Subways
- 6. Bridges, Trestles, and Culverts
- 7. Elevated Structures
- 8. Ties
- 9. Rails
- 10. Other Track Material
- 11. Ballast
- 12. Tracklaying and Surfacing
- 13. Right of Way Fences
- 14. Snow and Sand Fences and Snowsheds
- 15. Crossings and Signs
- 16. Station and Office Buildings
- 17. Roadway Buildings
- 18. Water Stations
- 19. Fuel Stations
- 20. Shops and Engine Houses
- 21. Grain Elevators
- 22. Storage Warehouses
- 23. Wharves and Docks
- 24. Coal and Ore Wharves
- 25. Gas Producing Plants
- 26. Telegraph and Telephone Lines
- 27. Signals and Interlockers
- 28. Power Dams, Canals, and Pipe Lines
- 29. Power Plant Buildings
- 30. Power Substation Buildings
- 31. Power Transmission Systems
- 32. Power Distribution Systems
- 33. Power Line Poles and Fixtures
- 34. Underground Conduits
- 35. Miscellaneous Structures
- 36. Paving
- 37. Roadway Machines
- 38. Roadway Small Tools
- 39. Assessments for Public Improvements
- 40. Revenues and Operating Expenses During Construction
- 41. Cost of Road Purchased
- 42. Reconstruction of Road Purchased
- 43. Other Expenditures—Road
- 44. Shop Machinery
- 45. Power Plant Machinery
- 46. Power Substation Apparatus
- 47. Unapplied Construction Material and Supplies
- II—EQUIPMENT:
- 51. Steam Locomotives
- 52. Other Locomotives
- 53. Freight-Train Cars
- 54. Passenger-Train Cars
- 55. Motor Equipment of Cars
- 56. Floating Equipment
- 57. Work Equipment
- 58. Miscellaneous Equipment
- III—GENERAL EXPENDITURES:
- 71. Organization Expenses
- 72. General Officers and Clerks
- 73. Law
- 74. Stationery and Printing
- 75. Taxes
- 76. Interest During Construction
- 77. Other Expenditures—General

A SPECIAL VACATION TRAIN for employees is the latest thing in passenger travel sales. The National Cash Register Company, of Dayton, Ohio, arranged for a special train to carry several hundred of its employees to Miami, Fla., and return to spend a one-week vacation in August.

Motor Transport Section



The Illinois Central's Present Truck Fleet Radiates From Carbondale, Ill.

I. C. Plans Truck Expansion

Present operations save cars for defense
loads and proposed lines
would save more

If the Illinois Central is permitted to establish the rail-highway co-ordinated service for which it now has applications on file, approximately 110 freight cars per day will be saved for national defense purposes. Also, as has been demonstrated in the co-ordinated operation centering at Carbondale, Ill., the shippers at local stations will receive their L. C. L. freight from 24 to 48 hr. earlier than has hitherto been possible. The same savings in time are effected on outbound shipments from these stations picked up by the trucks on their return trip.

As described in detail later, this railway now has applications pending for 13 truck routes along the I. C. proper and 14 along its subsidiary, the Y. & M. V., in Mississippi, Alabama, Arkansas, Kentucky, and Tennessee, and 14 routes in Illinois, radiating from such points as Centralia, Clinton, Springfield, Mattoon and Kankakee. The applications on these last routes were recommended for approval by an I. C. C. examiner last week. If all the applications are approved, it will give the I. C. co-ordinated service along the entire main line and several branches between Kankakee, Ill., and Jackson, Miss.; as well as along the Y. & M. V. main line between Memphis, Tenn., and Vicksburg, Miss., and between Meridian, Miss., and Vicksburg.

The Carbondale Operations

In June, 1939, the I. C. began co-ordinated rail-highway service centering at Carbondale, Ill., and serving 64 local points on the main and branch lines in that vicinity.

The trucks involved were leased from the Railway Express Agency, which supplies the drivers and maintains the trucks.

The operations, however, are entirely under the control of the Illinois Central, and the trucks are painted I. C. colors and identified as railway trucks.

Freight for the area served arrives from St. Louis about midnight, and from Chicago at 3 a. m. The Carbondale freighthouse is kept open all night and the merchandise is reworked and classified for the various routes, the trucks leaving between 5 and 5:30 a. m., giving first morning delivery before 10 a. m. even at the ends of the runs. The I. C. has rail lines out of Carbondale in several directions and this is also true of its truck lines. One truck is operated northwest to Belleville, 84 miles, closely paralleling the St. Louis-Carbondale main line. A second route operates due north to Centralia, 70 miles, along the Carbondale-Chicago rail line. A third route operates parallel to the main line from Carbondale to Cairo, 58 miles.

The other three truck routes cover local stations in branch line territory. One route operates southwest from Carbondale, via Murphysboro, to McClure, Ill., 51 miles, opposite Cape Girardeau on the Mississippi river. The second branch-line route operates northeast from Carbondale to Benton, 39 miles. The third route runs directly east from Carbondale via Marion and Harrisburg to El Dorado, 47 miles. This route makes a loop to serve West Frankfort and several other towns, so that the round trip is well over 100 miles.

These relatively short truck routes save 20 cars daily

that were formerly operated in this territory. They do not replace any trains, but the handling of carload traffic on the locals has been materially improved, because of the elimination of time lost in stopping to unload shipments that frequently consisted of only a relatively few pounds of L. C. L. freight.

Good Results Obtained

Merchandise traffic handled to the 64 stations served has showed a continuing increase of more than 20 per cent since the inauguration of the co-ordinated service. The increase would be even greater except that, after all plans had been made and shortly before the truck lines began to operate, the Interstate Commerce Commission issued an order requiring a 45-cent-per-100-lb. minimum rate on rail shipments before free pick-up and delivery service could be supplied. This has had the effect of barring free collection and delivery on interstate shipments of all commodities in the lower rate classifications from St. Louis to the territory involved.

The Illinois Central was one of the first roads to establish a specialized department charged with responsibility for the solicitation and development of L. C. L. traffic. When the southern Illinois co-ordinated service began, this department placed a number of men in the territory and made practically a house-to-house canvass supplemented by appropriate advertising to acquaint all shippers and receivers in each of the 64 points involved with the new service, as well as at originating points such as Chicago and St. Louis. Once the missionary work was finished, the solicitation of the L. C. L. business was turned over to its regular traffic force. The success of this sales program is indicated by the increased traffic in a territory where truck competition is unusually keen and where hard-surface highways connect every large town and most of the villages.

The Proposed Illinois Routes

The success of the Carbondale operations moved the I. C. to make application for the 42 additional routes now pending.

The 14 routes located in central Illinois will cover practically all of the main lines between Chicago and Centralia and between Chicago and St. Louis. Five of these routes will radiate from Clinton, as follows:

	Miles (One-way)
Clinton-Minonk	53
Clinton-Havana	66
Clinton-Champaign (via Monticello)	40
Clinton-Kankakee	93
Clinton-Pana	56

Five other routes will radiate from Mattoon, as follows:

	Miles (One-way)
Mattoon-Mount Pulaski	67
Mattoon-Centralia	83
Mattoon-Champaign	46
Mattoon-Palestine	76
Mattoon-Grayville	98

The other four routes will be operated as follows:

	Miles (One-way)
Centralia-Pana	63
Springfield-Clinton	51
Springfield-Alhambra	73
Kankakee-Champaign	78

These routes, with the addition of those already in operation will give the I. C. a co-ordinated service in Illinois comprising just over 2,500 truck miles daily, serving over 225 points on its railway. The number

of car miles saved daily by such operations will be an important contribution to national defense.

Co-ordination in the South

The southern co-ordinated service will comprise 13 truck routes paralleling the I. C., and 14 along the Y. & M. V. The latter routes will be as follows:

	Miles (One-way)
Memphis, Tenn.-Clarksdale, Miss.	75
Clarksdale, Miss.-Greenville, Miss. (via Cleveland, Miss.)	73
Clarksdale, Miss.-Greenville, Miss. (via Rosedale, Miss.)	82
Clarksdale, Miss.-Greenwood, Miss.	57
Clarksdale, Miss.-Belzoni, Miss.	83
Clarksdale, Miss.-Lake Cormorant, Miss.	47
Belzoni, Miss.-Yazoo City, Miss.	35
Durant, Miss.-Greenwood, Miss.	57
Vicksburg, Miss.-Greenville, Miss.	94
Jackson, Miss.-Tchula, Miss.	73
Grenada, Miss.-Greenwood, Miss.	33
Jackson, Miss.-Vicksburg, Miss.	44
Jackson, Miss.-Meridian, Miss.	85
Clarksdale, Miss.-Helena, Ark.	35

The 13 routes paralleling the I. C. proper will be:

	Miles (One-way)
Memphis, Tenn.-Grenada, Miss.	99
Grenada, Miss.-Holly Springs, Miss.	82
Grenada, Miss.-Durant, Miss.	54
Jackson, Tenn.-Holly Springs, Miss.	81
Corinth, Miss.-Haleyville, Ala.	83
Durant, Miss.-Aberdeen, Miss.	98
Jackson, Miss.-Durant, Miss.	57
Fulton, Ky.-Paducah, Ky. (via Wickliffe)	74
Fulton, Ky.-Paducah, Ky. (via Mayfield)	45
Fulton, Ky.-Jackson, Tenn.	62
Fulton, Ky.-Dyersburg, Tenn.	46
Memphis, Tenn.-Dyersburg, Tenn.	75

If the applications are granted and the truck routes put in operation, the I. C. will have one of the most complete rail-highway co-ordinated services in the country. The attendant benefits to shippers and receivers in the widespread territory involved through the speeding up of merchandise shipments will be great, particularly in these days when swift transportation is essential. Moreover, the savings in car days will be a most important contribution to national defense.

National Trailways Still Growing

THE National Trailways System, in only a few years, has grown into a transcontinental maze of bus routes, reaching New England and Florida; Montana and Texas; Washington and California. In fact, member companies now operate in every section of the country, and through friendly connections reach practically every city and town.

This huge system, operating millions of bus miles annually, was started originally by a group of railway bus subsidiaries wishing to have a central organization for advertising and other interests of mutual benefit. From this small beginning of half a dozen companies, the National Trailways System has grown until it embraces 40 separate companies, as follows:

Adirondack Trailways
Safeway Trailways
Northern Trailways
Trailways of New England
Yankee Trailways
Indianapolis & Southeastern Trailways
Red Star Trailways
C. & L. E. Transportation Company
Virginia Trailways
Queen City Trailways
Smoky Mountain Stages
Georgia Trailways
Bay Line Trailways
Carolina Trailways
Virginia-Carolina Trailways

Carolina Scenic Coach Lines
 Crescent Stages
 Tamiami Trailways
 Capital Motor Lines
 Dixie Coaches
 Evergreen Trailways
 Burlington Trailways
 Jacksonville Trailways
 Central Trailways
 M. K. & O. Trailways
 Southwestern Trailways
 Panhandle Trailways
 Rio Grande Trailways
 Mo. Ark. Trailways
 Denver-Salt Lake-Pacific Trailways
 Denver-Colorado Springs-Pueblo Trailways
 Santa Fe Trailways
 A. W. Shepherd Bus Lines
 Dixie Trailways
 Sunshine Trailways
 Interurban Trailways
 Bordelon Trailways
 Missouri Pacific Trailways
 Bowen Trailways
 Tri-State Transit Company

These include five steam railway and two electric railway subsidiaries, and the railway subsidiaries represent nearly half of total mileage. The owning lines are:

Atchison, Topeka & Santa Fe
 Atlanta & St. Andrews Bay
 Chicago, Burlington & Quincy
 Denver & Rio Grande Western
 Missouri Pacific

One of the characteristic policies of the National Trailways System has been the improvement of its bus terminals. Individual companies have progressed along these lines in the smaller cities, while the System has established modern joint terminals in several of the larger cities. Member lines have also been progressive in modernizing and air-conditioning equipment and in the use of Diesel-powered buses.

Communication . . .

Would Divorce Transport From Other Business

OKLAHOMA CITY

TO THE EDITOR:

I wish to congratulate you on your recent editorial in *Railway Age* entitled, "The Vitaly Important Long-Range Trends," because it treats the rails and motor carriers for hire as one; and because it recognizes the serious threat of competition now being experienced by the transportation agencies for hire resulting from privately owned transportation agencies.

The Distributors Transportation League, as you know, is endeavoring to divorce transportation and industry.

Without a doubt, freight can be moved in consolidated train-load lots far cheaper than by any other form of transportation. Also the motor carriers for hire, having available consolidation of tonnage from various shippers, must be able to haul freight at a lower cost than privately-owned transportation agencies. It is strange therefore that privately-owned transportation agencies can develop operating costs so much lower than those in effect via the railroads and truck lines for hire. Unfortunately many industrial executives in the rank and file of our citizens are, and will be, deceived because it appears that transportation in this section should be taken over by privately-owned transportation agencies, because savings in freight rates can thus be enjoyed.

Anti-Social Effects of Private Hauling

Our league knows the industrial truck line is used extensively in three manners, taking freight tonnage away from the transportation agencies for hire. These are as follows:

- 1.—Short-haul traffic, delivering small lots of merchandise within zones of 150 miles;
- 2.—Long-haul traffic, subject to the higher brackets of freight rates—such as luxury articles;



Modern, Air-Conditioned Buses Are a Feature of National Trailways' Main-Line Routes

3.—Itinerant and gypsy truckers who merge commodity prices and transportation profits as one.

In the instance of Number 1, such a shipper depends upon the transportation agencies for hire to get the freight to him so that he may operate his transportation agency; he therefore chisels the revenues of the transportation agencies for hire on whom he is dependent. In the instance of Number 2, this operator is indirectly proposing that scrap iron and silver-plated ware and cut-glassware should move at the same basis of freight rates. In the instance of Number 3, this operator is doing his utmost to tear down the constructive work of the A. A. A., farm control price methods, while at the same time destroying legitimate jobbers and wholesalers and seriously injuring adequate transportation agencies.

All of these three types of operators are using a system under which they may rebate if they wish, preference of one point to the prejudice of another, ignore the freight rate regulations of the State Commissions and the Interstate Commerce Commission, operate when they please, destroy adequate transportation as they choose, put their competitor industry out of business, who is trying to use the transportation agencies for hire. We do not honestly feel that Congress or our various Commissions can condone or long tolerate such abuses without endeavoring to take some corrective action.

I note your statement in editorial that transportation agencies for hire must reduce their rates to re-attract business from privately-owned transportation agencies. We do not believe this is possible under present conditions. Without going into the truck phase of this element I wish briefly to remark upon the rail phase of reducing rates to re-attract business from private carriers. The rails are burdened with excessive taxation, well-organized union labor groups' wage scales, regulatory laws that compel them to continue operations of all types when they are not profitable, the maintenance of offices in all of the principal cities in the United States for service to the shipping and traveling public. The latter item within itself is an immense added cost of operation.

They are also burdened with the reasonable and sane rate construction methods developed in our nation and prescribed by our Commissions, which make the freight rates on coal, sand, gravel, scrap iron, etc., very low, while securing much higher rates on luxury articles—thus receiving a balanced gross revenue that is best fitted to the commercial requirements of our nation. To reduce the rates on the luxury articles or upper brackets would reduce gross revenues; we must, in turn therefore, increase the rates in the lower brackets. This cannot reasonably be done.

I am attaching hereto copy of recent freight rate proposal docket which speaks for itself. I only wish to call attention to the truck-mile cost of around 8 cents per operating mile. Note freight rates requested would result in reductions by the rails of more than 50 per cent. Also note the articles are mirrors and springs, and when the shipper in this instance has stated he will not give the business to the rails unless the rails will reduce rates in accordance with his desire, he has also stated that he proposes to increase the price on a ton of coal used to heat the homes of the poor—for inexorably the railroads must have gross revenues that will reflect about what they are now enjoying and, if they reduce the freight rates in one instance on articles like those governed by the enclosed docket, they must find their revenues somewhere else.

Last week one of our industrial executives stated to a rail representative, who had asked for the return of some tonnage which his railroad had previously moved, that the tonnage was not now available; that it was moving, all of it, in trucks owned by the manufacturer from Kansas City, Mo., to Oklahoma City. This executive further stated that two years ago approximately 200 carloads of iron and steel were moving via the railroads for his firm, but now the entire movement was in trucks owned by the manufacturer. I have checked this movement and it would require a reduction in freight rates of approximately 38 per cent on the part of the rails if the business is to be re-attracted back to the rails.

This league will go into Congress next January at Washington sponsoring corrective legislation. Our hope of success is in doubt, but we believe that the majority of the rank and file of industry can be awakened to the fact that the present intolerable conditions cannot continue and that we can convince the wise men in Congress that corrective action is necessary to preserve adequate transportation agencies for hire in this nation and to preserve

industries that are using such transportation agencies for hire in shipping their freight.

Mark you well, one of the principal objections which will be offered to our corrective legislation will be the contention of industries operating private trucking agencies that they can operate below the costs of the rails' and motor carriers' rates for hire. One of the factors why the truck lines for hire cannot reach the level of private trucker's rates, other than the facts heretofore set forth (and the truck's traffic is subject to all of the vicissitudes of the rails), is the tendency of our law-making bodies to unduly penalize common carrier truck lines in the form of taxation to the preference of privately-owned transportation truck lines.

Tax Advantage of Private Trucks

As an illustration, the Governor of Oklahoma signed a new motor vehicle law on May 20, 1941, and this law provides a yearly fee of \$382.50 for a ten-ton motor truck unit operated by truck lines for hire, but the same unit, identical in every detail, operating over the same highways, hauling the same freight, operating daily, if owned and operated by an industry, bears a tax of \$255.00 per year or a difference of \$127.50 in favor of the private carrier. As the capacity of the trucks goes upward, the discrepancy named becomes greater. Let us not lose sight of the fact that one of the largest common carrier truck lines in Oklahoma is owned and operated by the Santa Fe Railroad.

I respectfully submit the above to you, hoping that in same you may find additional material for editorial purposes and I urge that you continue your valuable contribution towards solving our nation's transportation problems.

F. P. WILLETT,

Manager-Sec'y, Distributors Transportation League.

The rate proposal enclosed by Mr. Willette reads as follows:

Pertinent Portions of Southwestern Freight Bureau Proposal 24949

COMMODITY: Mirrors, in boxes or crates, as described in Item 19590
of Consolidated Classification 14, carloads.

MINIMUM WEIGHT: 18,000 pounds.

FROM: New Orleans, La.

TO: Oklahoma City, Okla.

PROPOSED CHANGE: Establish rate of 72 cents per hundred pounds.

PRESENT BASIS: \$1.07 per 100 pounds.

TARIFF REFERENCE: Class 45, Item 2150, SWL Tariff 173-M, ICC 3389.

REASONS FOR CHANGE: An interested shipper has requested the establishment of above rate, and for convenience quote the request:

"We have recently made a connection with the Company to handle our line of bed springs that we manufacture in Oklahoma City. We desire to give this business to the railroads, but, find that your present rates will not enable us to do so.

"The present rail rates on furniture and bed springs to New Orleans is as follows:

12,000 pound minimum	\$1.43	22,000 pound minimum	\$.98
15,000 pound minimum	1.19	30,000 pound minimum	.87
18,000 pound minimum	1.07		

"As you know, we are operating six road trucks delivering our products to various points in the west and south. Unless we can get a rate that will enable us to give this business to the railroads it will be necessary that we purchase additional equipment and handle these shipments on our own trucks.

"In the past we have been buying a considerable quantity of mirrors, which are manufactured in New Orleans, and these have been moving by truck line at a rate of 95 cents per 100 pounds, minimum weight 14,000 pounds. By hauling bed springs to New Orleans and mirrors back to Oklahoma City we could show a net profit on each load of \$227.94 using the present truck and rail rates.

"We submit to you below a statement showing our actual cost on handling these two commodities on our own trucks and the amount of revenue we would earn per truck load:

From New Orleans 20,000 pound Mirrors \$0.95 \$190.00

To New Orleans 14,000 pound Springs 1.19 166.60

\$356.60

Cost of Truck Operation

1480 Miles round trip to New Orleans at \$0.087 128.76

Net profit per trip \$227.94

The highway mileage to New Orleans is 740 miles from Oklahoma City, which would be 1480 miles for a round trip. The cost per mile for operating our own trucks amounts to .087. This is an actual figure based on several years of truck operation.

"We prefer to use our trucks for short hauls in and around Oklahoma City, and give the long hauls to the railroads, but cannot afford to do so when your rates are so high that it is profitable to use our own trucks. If we can secure a rate from the railroads based on a minimum of 18,000 pounds per car at a rate of around 60 cents per 100 pounds, we could return this traffic to them.

"We think that the rate should be based on the same percentage as the present rate that we have on furniture and springs to Houston, Texas, which is 52 cents per 100 pounds, minimum weight 18,000 pounds. We think that the rate from New Orleans to Oklahoma City on mirrors should be approximately 20 per cent above the furniture and spring rate to New Orleans, which would be approximately 72 cents per 100 pounds on 18,000 pound minimum.

"This traffic is going to start moving immediately. This is going to amount to considerable traffic, possibly fifty to seventy-five cars per year and it is going to be necessary that we truck both of these commodities until we can secure something around the above rates that we have mentioned.

"We will appreciate your filing a proposal for us and expediting this as much as possible, keeping us advised as to the developments."

NEWS

Frowns on Illegal Truck Operation

Past operations, if no good for grandpa rights, will not support new operations

Motor carriers whose applications for "grandfather" clause rights have been denied cannot employ evidence of past operations to support applications for certificates of convenience and necessity covering "new operations" on the routes involved in the "grandfather" claim. The Interstate Commerce Commission, Division 5, has thus decided in denying applications of A. E. McDonald Motor Freight Lines of Waxahachie, Tex., and four other similar applications of other Texas truckers.

The McDonald case is docketed as No. MC-80415 (Sub-No. 2), and in it the commission establishes its rule with Commissioner Lee dissenting. McDonald sought a certificate covering operations between Galveston, Tex., Houston, San Antonio, Fort Worth, Dallas, Oklahoma City, Okla., and Tulsa—"substantially the same operations as those denied in the 'grandfather' proceeding." In denying the latter the commission found the operations not bona fide in that they "were conducted in defiance of the Texas law; and that the underlying right to engage in the business of common carriage by motor vehicle was never obtained from the state."

Protestants to the "new operation" application argued that "applicant must be considered to be a new operator seeking to enter the transportation field and must present proof that the present or future public convenience and necessity require its proposed service without any relation to its past operations which have been condemned as not bona fide." Accepting that view, the commission struck out the evidence assailed, asserting that McDonald "is entitled to no benefits arising from its unauthorized use of the Texas highways, such as those which might accrue from the evidence based on past operations." Then it went on to deny the application with a finding that the record "not only fails to show definitely that the presently available facilities of the regular-route motor common carriers and rail lines between the points covered by this application are inefficient or inadequate to supply the demands of the interested shippers, but on the contrary it does show that these carriers have been, and are, able to provide adequate and efficient service."

Dissenter Lee asserted that the commission has "consistently held, and soundly

too, that public patronage of a transportation service is evidence that it meets the public convenience and serves the public need." In the majority report, as Mr. Lee reads it, "punishment of applicant for 'unauthorized use of the Texas highways' is found to be paramount to the needs of the public for transportation service." Viewing the case from the standpoint of the applicant's interests, Mr. Lee found nothing in the Supreme Court's decision on McDonald's difficulties with Texas authorities (McDonald v. Thompson, 305 U. S. 263) or the commission's decision in the "grandfather case" to bar granting the present application.

The other four cases decided in like manner were: MC-37163 (Sub-No. 1), Julius C. Tips—New Operation; MC-2960 (Sub-No. 1), D. A. Beard Truck Lines Co. Common Carrier Application—New Operation; MC-15324 (Sub-No. 1), W. B. Keele—New Operation; and MC-67158 (Sub-No. 1), Lon D. Fisher Common Carrier Application—New Operation. In all except the Tips case, where he concurred "in the result," Commissioner Lee's dissent is noted.

Meeting of Transportation Officers

The Western Railways' Committee of Operating Officers has called a meeting of all transportation officers to be held at the Stevens Hotel, Chicago, on September 4. It is understood that the purpose of the meeting is to review the freight car situation, and discussions will cover car supply, car distribution, observance of car service rules, and other matters bearing on requirements to be placed on the railroads during the fall's period of peak loadings.

Would Bar Land-Grant Deductions from Special Emergency Rates

Chairman Lea of the House committee on interstate and foreign commerce has introduced H. R. 5598 to amend the Transportation Act of 1940's land-grant repeal provisions by inserting a specific definition of military or naval property (which is still eligible for the land-grant rates); and by stipulating that property "of any description" moving upon special emergency rates carried in tariffs filed at the request of an agency or department of the government for purposes connected with national defense shall be subject to such special rates without any land-grant deductions therefrom.

The former provision says that "military or naval property of the United States shall embrace only munitions and implements of war and property necessary for the maintenance and subsistence of the armed forces of the United States."

House Gets Its Forwarder Bill

Committee reports a measure which differs widely from bill okayed by Senate

The House committee on interstate and foreign commerce on August 13 filed its favorable report on a proposed new Part IV of the Interstate Commerce Act for the regulation of freight forwarders, the recommended legislation retaining the S. 210 number of the Senate-approved Wheeler-Reed bill but amending that measure by striking it all out and inserting a complete substitute. Action in the House is expected to be delayed until after the middle of next month, because Congress this week went on a vacation schedule calling for a series of recesses with no business until after September 15.

Among other changes from the Senate bill, the House version permits carriers to publish "assembling" and "distribution" rates to supersede the joint-rate arrangements between forwarders and motor carriers which are given a death sentence. The Senate version likewise called for the cancellation of the joint-rate arrangements, but it also required that forwarders pay regularly-published tariff rates of the carriers. Also absent from the House bill is that minimum-rate provision of the Senate bill which would prohibit the publication by a forwarder of a rate "which is lower than the lowest rate published by any carrier or carriers subject to this act whose facilities are used . . ."

The Senate bill had a "grandfather" clause and provisions for certificates of convenience and necessity. The House bill with no "grandfather" clause provides for the issuance of permits to engage in forwarder operations to any person whom the Interstate Commerce Commission finds "to be ready, able, and willing properly to perform the services proposed, if it finds that the proposed service is or will be consistent with the public interest and the national transportation policy." Moreover no application filed by a forwarder controlled by a common carrier subject to Parts I, II, or III of the act could be denied because of such relationship; nor could any permit application be denied solely on the ground that the proposed service will be in competition with services of other freight forwarders.

In connection with the control of forwarders by carriers, the Senate bill made such control lawful with the approval and authorization of the commission. The

House bill provides that nothing in the Interstate Commerce Act shall be construed to make it unlawful for any common carrier subject to the act to acquire control of freight forwarders. These provisions, said the House committee report, "are intended to carry out the policy of permitting such carriers to engage in freight forwarding indirectly, through control of subsidiary corporations, but of not permitting them to engage directly in the freight-forwarding business." Moreover, it is further provided that where such control exists no rate or practice of the controlled forwarder shall be held to be unlawful because of its relationship to a common carrier. In other words there could be no commission finding like that in the Freight Forwarding Investigation to the effect that railroads, through their controlled forwarders, were charging rates different from those published in the rail tariffs.

The House committee's substitute contains no commodities clause; such a clause in the Senate version provided that "from and after January 1, 1942, it shall be unlawful for any officer or employee of any carrier subject to Part I, II or III of this act or any person using the facilities or services of a freight forwarder, to own, lease, operate, control, or have any pecuniary interest whatsoever, either directly or indirectly, in any forwarder"

As the committee report put it, the House version's definition of "freight forwarder" includes only those "who hold themselves out to the general public." In other words there are exemption provisions stipulating that regulation "shall not apply (1) to services performed by or under the direction of a cooperative association, as defined in the Agricultural Marketing Act, . . . or by a federation of such cooperative associations . . . , or (2) where the property with respect to which service is performed consists of ordinary livestock, fish (including shellfish), agricultural commodities (not including manufactured products thereof), a single general commodity, or used household goods, if the person performing such service engages in service subject to this part with respect to not more than one of the classifications of property specified above." Another exemption provision states that the act shall not be construed to apply "(1) to the operations of a shipper, or a group or association of shippers, in consolidating or distributing freight for themselves or for the members thereof, on a non-profit basis, for the purpose of securing the benefits of carload, truckload, or other volume rates, or (2) to the operations of a warehouseman or other shippers' agent, in consolidating or distributing pool cars, whose services and responsibilities to shippers in connection with such operations are confined to the terminal area in which such operations are performed."

The definition of services, the committee report explained, "is intended to be broad enough to cover everything the freight forwarder does in connection with forwarding by surface facilities." However, freight forwarding by use of air facilities is left to be regulated by the

Wage Mediation Still Under Way

Mediation of the proposals of certain railways to change working rules and of the demands of the brotherhoods for increased pay, which started at Chicago on August 14, continued this week. On each morning, the three members of the National Mediation Board have been meeting with the chiefs of the five operating brotherhoods, early in the afternoon with the representatives of the 14 non-operating brotherhoods and in late afternoon with the conference committees of the railroads. These meetings are being held behind closed doors.

The main issues under mediation are the demand of the five operating unions for an increase in pay of 30 per cent, the demand of the 14 non-operating unions for a minimum wage of 70 cents per hour as the lowest rate to be paid in the industry and with other corresponding increases which would provide rates up to \$1.15 per hour for highly-skilled workers and the proposals of the railroads to change working rules. It is expected, however, the demand of the non-operating unions for vacations with pay and the western railroad's counter proposal to reduce wages 10 per cent will be considered during the mediation.

Civil Aeronautics Board. The section on rates, charges and practices is substantially the same as similar provisions applying to railroads, motor and water carriers. The same is true of provisions relating to forwarder tariffs and the commission's authority over rates and practices. Another section brings under regulation motor carrier rates applicable to small-parcel forwarding, i. e., the so-called packing companies which consolidate small packages into 100 lb. lots. The report states that the authority of such companies to continue to have contract rates with motor carriers "is open to doubt." Thus the bill authorizes the commission to permit for such operations rates "as low as may be consistent with the receiving of reasonably adequate compensation by the carriers."

The bill's aforementioned provisions authorizing carriers to publish "assembling" and "distribution" rates, contains detailed specifications for the new set-up thus provided as a substitute for the condemned joint-rate arrangements between forwarders and motor carriers. The "assembling" and "distribution" rates, which would be lower than the regular rates, would have to be justified on the basis of differences in conditions; and they would be available to all shippers in a position to use them like the forwarders do. Moreover, they would be restricted to the assembling and distribution operations, and could not be used for a line-haul movement. The existing joint-rate arrangements between forwarders and motor car-

riers would be permitted to remain in effect for a transition period of 18 months, although no new tariffs naming such joint rates could be filed after six months from the bill's enactment date. And the I. C. C. is given authority to shorten the transition period if it finds that the readjustment may be carried out within a shorter time than the 18 months. These joint-rate arrangements have been condemned for some time in outstanding orders of the commission, but the effective date of such orders has been postponed from time to time while Congress worked on legislation for the regulation of forwarders. The latest postponement set the deadline for October 1, but it is unlikely that Congressional action will be completed on the legislation by that time.

Aside from the foregoing and other provisions to be embodied in the proposed new Part IV to the Interstate Commerce Act, the bill would amend the Motor Carrier Act to give terminal trucking operations of forwarders a status like that given such operations of railroads and line-haul motor carriers. Also the Civil Aeronautics Act of 1938 would be amended to make the Civil Aeronautics Board's authority over air forwarding operations like that which the I. C. C. would receive over forwarding by surface carriers.

Passenger Coach Runs Away

As a result of a defective drawbar and brakes, the rear coach of a passenger train, operating from Tampico to San Luis Potosi on the National Railways of Mexico, broke loose on a four per cent grade at Zacate, S. L. P., and overturned after running downhill for a mile, killing 4 passengers and injuring 2 trainmen and 21 passengers.

New Army Chief of Engineers

President Roosevelt on August 19 sent to the Senate his nomination of Brigadier General Eugene Reybold to be chief of engineers with the rank of major general for a period of four years. General Reybold, who will succeed Major General Julian L. Schley, has served in the Office of the Chief of Engineers in Washington, D. C., and on rivers and harbors work at Wilmington, N. C., Memphis, Tenn., and Little Rock, Ark. Major General Schley's term expires October 17.

Gorrell Becomes Budd's Air Transport Consultant

Ralph Budd, defense transportation commissioner, has announced the resignation of C. R. Smith as consultant on domestic air transportation in the Transportation Division, Office for Emergency Management, and appointment of Colonel Edgar S. Gorrell in his place. Colonel Gorrell is president of the Air Transport Association of America, representing the commercial air transportation companies. Mr. Smith is president of the American Airlines.

Rock Island Gets Chicago-Joliet Trucking Certificate

Subject to the usual conditions designed to insure that the highway service shall be supplementary to rail service, the Inter-

state Commerce Commission has granted to the Rock Island Motor Transit Company, affiliate of the Chicago, Rock Island & Pacific, a certificate authorizing common-carrier trucking operations over a 49-mile route between Chicago and Joliet, Ill. At the same time the commission denied that part of the application wherein Transit sought to engage in interstate motor vehicle operations, without reference to rail service, through interchange of traffic with other motor carriers at Chicago and Joliet.

Status of R. F. C. Rail Loans

The monthly statement of the Reconstruction Finance Corporation as of July 31 shows disbursements to railroads (including receivers and trustees) of \$810,325,175, and repayments of \$353,085,106.

7,354 Tank Cars Available to Move Oil in East

There are 7,354 tank cars immediately available for movement of petroleum and its products in the East, according to a survey made by Defense Transportation Commissioner Ralph Budd's Tank Car Service Committee. The information has been furnished to Defense Petroleum Coordinator Ickes.

Meanwhile the Office of Price Administration and Civilian Supply has responded to a request from Mr. Ickes and issued a civilian allocation program ordering an immediate cut of 10 per cent in deliveries of gasoline by suppliers in the Atlantic Coast area. The OPACS announcement said that the action was necessary "because of the shortage of transportation facilities."

Cars for Handling Aluminum Scrap

Because instances have arisen where equipment has been delayed, W. C. Kendall, chairman of the Car Service Division, has issued a circular advising railroads of requirements with respect to ordering and placing of cars for shipments to smelters in connection with the collection of aluminum scrap.

"The collection of this scrap," Mr. Kendall said, "is under the jurisdiction of state procurement officers and of the Office of Production Management, and is generally under the direction of local committees. Smelters will pay transportation charges from concentration points to the smelters and will give shipping instructions either direct to the railroad or through the local committee. Some instances have arisen where cars have been ordered by local committees and loaded in advance of allocation of shipments to a particular smelter which has resulted in delays to equipment and accumulation of demurrage. Cars should not be placed for loading until specific shipping instructions are available from smelters."

Accounting Classification Amendments

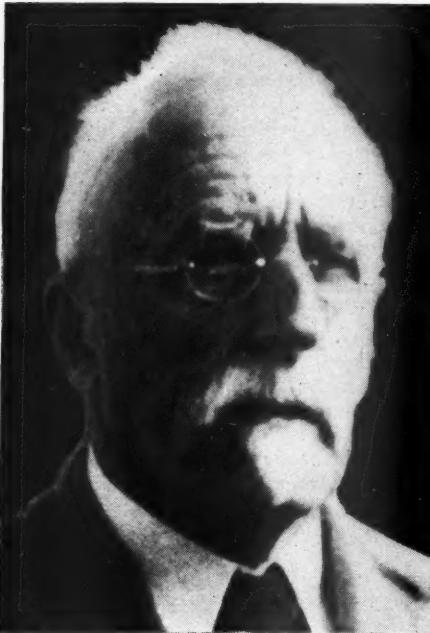
Accounting classification modifications to become effective January 1, 1942, have been made by the Interstate Commerce Commission, Division 1, in two orders dated August 6 and made public late last week.

One order relates to amendments of the

general balance sheet accounts covering the manner of recording book value of securities owned, and providing a new balance sheet account entitled "Reserves for Adjustment of Investment in Securities." The other changes the list of units in the Investment in Road and Equipment Account for passenger-train cars, and amends the Income, Profit and Loss and General Balance Sheet Accounts so as to provide that notes having maturity dates within one year from date of issue shall be considered short term notes for purposes of accounting, in lieu of two years as at present. Other classification modifications of a minor nature are also ordered.

Dr. Ripley, Railroad Authority, Dies at 73

Dr. William Zebina Ripley, professor emeritus of political economy at Harvard University, and a distinguished student and commentator on railroad affairs, died at his summer home at Edgecombe, Me., on August 16, at the age of 73. An indefatigable student and forceful writer on busi-



William Zebina Ripley

ness and financial problems, Dr. Ripley is best known in railroad circles as author of a tentative plan for consolidation of all Class I roads in the country into a limited number of systems.

Although he devoted the greater part of his time to his academic career and the authorship of numerous articles for such publications as the "Atlantic Monthly" and the now-discontinued "World's Work," Dr. Ripley frequently left the study and the classroom to take direct part in important events in the railroad world. Authorship of three painstaking and fundamental studies of railroad rates, finance and management—"Railway Rates and Problems" (1907); "Railroads . . . Rates and Regulation" (1912) and "Railroads . . . Finance and Organization" (1914)—brought him prominence as a transportation authority and the respect and regard of railroad executives.

In 1920 he was chosen by the Interstate

Commerce Commission to prepare a tentative consolidation plan as a basis for public hearings out of which would emerge a definitive plan to fulfill the obligations imposed under the Transportation Act of 1920. With characteristic fairness and thoroughness Dr. Ripley approached his "formidable task." First he conferred with the presidents of the larger roads, then started an extensive program of correspondence to tap the views of every possible party in interest. He concentrated first on the New England situation (which he considered his most difficult problem), then moved on to the Eastern trunk line problem (runner-up for difficulty) and finally to Western and Southern lines.

After a great deal of "give-and-take" he finally submitted a report recommending consolidation of Class I roads into 21 systems, his chief consideration being comparable earning power of each. The New England and Michigan peninsula roads, he advised, should be merged each as a regional system. His treatment for the remaining Eastern roads was called by some the "Five Party Plan," in that two trunk lines would be created in addition to the New York Central, Pennsylvania and Baltimore & Ohio systems, rather than one, as was advocated by those who desired one strong system to compete with the overwhelming strength of the latter trunk lines. On September 28, 1921, the I. C. C. made public a tentative plan for 19 systems in the country, with alternative schemes for allocating the New England carriers. This report was a bare outline, to which was attached Dr. Ripley's 21-system report as an appendix.

The tentative plan fared badly. Consolidation went on, but not according to its provisions. Then in 1930 and 1931, following the crash, the idea of consolidation was revived as a means of restoring confidence to the nation and credit to the carriers. Most energetic in spurring the Eastern railroad executives to action was Dr. Ripley, who without any official connection and at no compensation "commuted" between Cambridge, Mass., New York, Philadelphia, Pa., Baltimore, Md., and Washington, D. C., holding frequent conferences and carrying on a voluminous correspondence. Important among the results of his intercession was that President Hoover backed the consolidation move as far as he was officially able, and expressed belief that it was a major item in recovery.

W. Z. Ripley was born in Medford, Mass., on October 13, 1867, and was educated at the Massachusetts Institute of Technology (A. B. 1890) and Columbia University (A. M. 1892; Ph. D. 1893). From 1895 to 1901 he was professor of economics at the former institution. In 1901 he became professor of political economy at Harvard University, which post he held until 1933, when he was appointed professor emeritus. While holding the post at M. I. T., Dr. Ripley was also lecturer in sociology at Columbia University. In 1900 and 1901 he was appointed to the United States Industrial Commission as an expert agent on transportation. In 1908 he visited London, England, to serve as Huxley Memorial lecturer at the Royal Anthropological Institute, which invitation had been extended in honor of his dis-

tinction in his avocation as a student of anthropology. Between 1898 and 1901 he served as vice-president of the American Economic Association and in 1932 as president. In 1918 he was administrator of labor standards for the War Department. In 1919 and 1920 he was chairman, National Adjustment Commission, United States Shipping Board.

Between 1920 and 1923 he served as special examiner in consolidation of railroads for the Interstate Commerce Commission. In addition to the three books on railroad problems cited above, Dr. Ripley was author of a special report to the United States Eight-Hour Commission on Trainmen's Schedules and Agreements in 1917 and a prolific contributor to magazines. From 1917 to 1933 he served as a director of the Chicago, Rock Island & Pacific.

Money for Transport Board

An appropriation of \$100,000 for the transportation study board called for in the Transportation Act of 1940 is provided in H. R. 5412, a deficiency appropriation bill for national defense during the fiscal year ending June 30, 1942. The item, inserted in the Senate in an amendment offered by Majority Leader Barkley, was embodied in the conference report on the bill which was adopted by both houses of Congress on August 15.

The bill is now before President Roosevelt who has expressed opposition to another item providing for the construction of a new War Department building on a site near the Arlington Cemetery in Virginia; but Mr. Roosevelt did not state specifically that he would veto the measure.

As noted in last week's issue, members of the transportation board were confirmed by the Senate on August 11. They are: Nelson Lee Smith of New Hampshire, Robert E. Webb of Kentucky, and C. E. Childe of Nebraska.

R. F. C. Has Offered Loan to Pipe-Line Promoters

The Reconstruction Finance Corporation has offered to loan 80 per cent of the estimated \$80,000,000 over-all cost of the proposed 1,820-mile pipe line system from Louisiana to the New York-Philadelphia area, Federal Loan Administrator Jones revealed this week. Plans for the system were submitted recently to Petroleum Coordinator Ickes, as noted in the *Railway Age* of August 16, page 392.

Mr. Jones was reminded that the Ickes announcement had said that the 11 oil companies participating in the project were proposing a privately-financed corporation; and he replied that they may still get the money through regular banking channels. He hopes they will, but the R. F. C. offer is there if they want its aid in the financing. In response to further questioning, Mr. Jones said he thought the pipe line was needed. He went on to point out that many tankers have been diverted from their normal routes in connection with the aid-to-Britain policy, adding that there are not enough railroad tank cars to take their place. As he sees the situation, the alternatives are the pipe line or a tanker-building program, and any plans for

the latter would find the shipbuilding facilities pretty well taken up.

Freight Car Loading

Loadings of revenue freight for the week ended August 16 totaled 890,374 cars, the Association of American Railroads announced on August 21. This was an increase of 11,825 cars, or 1.3 per cent, above the previous week; an increase of 174,324 cars, or 19.8 per cent, above the corresponding week last year; and an increase of 220,581 cars, or 32.9 per cent, above the comparable 1939 week.

As reported in last week's issue, loadings of revenue freight for the week ended August 9 totaled 878,549 cars, and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading			
	For Week Ending Saturday, August 9		
Districts	1941	1940	1939
Eastern	177,718	145,753	133,181
Allegheny	193,543	155,298	129,693
Pocahontas	58,683	49,776	48,898
Southern	120,099	97,366	94,421
Northwestern	145,709	129,665	110,198
Central Western	127,634	105,707	100,937
Southwestern	55,163	43,508	43,695
Total Western Districts	328,506	278,880	254,830
Total All Roads	878,549	727,073	661,023
Commodities			
Grain and grain products	45,887	41,386	40,103
Live stock	10,021	10,732	11,234
Coal	166,429	125,857	114,061
Coke	13,056	10,283	6,734
Forest products	49,118	36,174	31,222
Ore	76,697	70,209	49,077
Merchandise l.c.l.	156,684	149,667	153,117
Miscellaneous	360,657	282,765	255,475
August 9	878,549	727,073	661,023
August 2	883,065	717,927	656,553
July 26	897,399	718,038	655,531
July 19	899,370	730,460	651,665
July 12	876,165	736,783	669,888
Cumulative Total, 32 Weeks	25,021,469	21,181,985	19,113,612

In Canada.—Carloadings for the week ended August 9 totaled 60,535, as compared with 63,144 in the previous week and 52,317 in the comparable 1940 week, according to the tabulation of the Dominion Bureau of Statistics.

Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:	
Aug. 9, 1941	60,535
Aug. 2, 1941	63,144
July 26, 1941	63,188
Aug. 10, 1940	52,317
Cumulative Totals for Canada:	
Aug. 9, 1941	1,867,540
Aug. 10, 1940	1,626,436
Aug. 12, 1939	1,389,165
	935,824
	775,857
	649,370

Express Representatives Hold Sales Conferences at Chicago

Selected representatives of the national selling organization of Railway Express Agency participated in a three-day sales conference at Chicago on August 13-15. While the conference theme was "Today's selling problem—making and keeping friends," the increasing pressure upon transportation facilities to assist in speeding up traffic indispensable to the national defense program also occupied the thought of the conferees. It was the consensus of opinion of more than 150 express officials and sales heads attending, that public good will is a vital factor in the retention and increasing of express traffic, which in some sections of the country is now run-

ning from 15 to 30 per cent ahead of normal volume.

Various speakers outlined how such objectives could best be reached. One of them was by "putting an extra candy in the bag," or providing extra service to shippers and consignees beyond what they would normally expect of a transportation company. Widening friendships through correspondence, in the handling of complaints and in serving the coming generation in the universities and colleges furnished ammunition for several district sales managers and commercial men on the program.

The sales conference, planned and engineered by K. N. Merritt, general sales manager of the Express Agency, included sketches, visual demonstration, movies, slide-sound films and a patriotic pageant enacted by the Chicago commercial staff in costume. Mr. Merritt also conducted a sales training demonstration to assist in the preparation of commercial men for increased efficiency in their work, while various ideas were offered to make local employees' meetings more varied and effective.

July Operating Revenues 30.8 Per Cent Above 1940

Preliminary reports from 89 Class I railroads, representing 80.9 per cent of total operating revenues, made public August 18 by the Association of American Railroads, show that those roads, in July, had estimated operating revenues amounting to \$387,086,646 compared with \$296,031,227 in the same month of 1940 and \$369,848,736 in the same month of 1930. The July gross was 30.8 per cent above that for July, 1940, and 4.7 per cent above July, 1930.

Freight revenues of the 89 roads in July, amounted to \$322,751,772 compared with \$241,554,255 in July, 1940, and \$282,094,251 in July, 1930—33.6 per cent above the former, and 14.4 per cent above the same month in 1930. Passenger revenues totaled \$38,407,669 compared with \$31,288,007 in July, 1940, and \$54,904,933 in July, 1930—22.8 per cent above the former, but 30.0 per cent below the same month in 1930.

Cost-of-Living Bonus on Canadian Railways

Prime Minister Mackenzie King and the Dominion Cabinet have been sitting as a court of appeal at Ottawa to hear representatives of the railways and the standard railway unions argue a point of interpretation arising out of Order-in-Council 7440 which defines the "cost of living bonus."

The railway and union groups, having agreed the bonus should be paid to railway employees, are in dispute as to the way in which the adjustment of the bonus from time to time should be made. The issue was left with the Cabinet, both parties agreeing to be bound by the Cabinet's decision.

The employees contended the Order-in-Council calls for payment of a bonus of \$1.25 per week when the cost of living index of the Dominion Bureau of Statistics advances five per cent above the level of August, 1939, and that further bonuses

should be paid as the cost of living advances still higher in relation to the level of August, 1939.

The railway representatives agreed that the first payment should be made when the cost advanced five per cent from August, 1939, but that further bonuses should be based on increases in the cost of living from the date of the last adjustment in the bonus.

In effect, the railways argued that, for future adjustments, the bonus should be payable if the cost of living advanced five per cent of 105, five per cent of 110 and so on, whereas the unions argued that the basis should be five per cent of 100, then 10 per cent of 100 and so on.

The index on July 2, last computation, was 11 per cent over that of August, 1939.

June Accident Statistics

The Interstate Commerce Commission on August 7 made public its Bureau of Statistics' preliminary of steam railway accidents for June and this year's first six months. The compilation, which is subject to revision, follows:

Item	Month of June		6 months ended with June	
	1941	1940	1941	1940
Number of train accidents	795	507	4,154	3,413
Number of casualties in train, train-service, and nontrain accidents:				
Trespassers:				
Killed	252	235	970	908
Injured	191	263	857	928
Passengers on trains:				
(a) In train accidents*				
Killed	39	40	4	26
Injured	166	125	839	769
Travelers not on trains:				
Killed	1	55	2	3
Injured	59	31	436	430
Employees on duty:				
Killed	54	31	311	243
Injured	2,181	1,366	10,641	8,554
All other nontrespassers:**				
Killed	149	121	972	960
Injured	407	323	3,158	2,955
Total—All classes of persons:				
Killed	458	387	2,263	2,141
Injured	3,043	2,172	16,477	14,193

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former cause damage of more than \$150 to railway property.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and non-trespassers, were as follows:

Persons:

Killed	125	107	880	876
Injured	265	219	2,213	2,177

Would Probe Priority Situation and Oil Shortages

Senate investigations of the administration of priorities and of shortages of gasoline, fuel oil and other petroleum products are proposed in resolutions introduced on August 19 by Senator Maloney, Democrat of Connecticut.

The priorities investigation is called for in Senate Resolution 157 which would create a special committee of five senators to be appointed by the president of the Senate to make "a full and complete investigation of the administration of priorities." A similar committee would be set up under

Senate Resolution 156 to make "a full and complete investigation with respect to the shortages of gasoline, fuel oil, and other petroleum products in the various states, the methods that are being employed for the purpose of curtailing deliveries of such products for ordinary consumer use, and the most effective means that may be employed for insuring an adequate supply of such products for national-defense purposes without undue hardship to business enterprise and consumers generally."

Urge Renewed Efforts to Defeat St. Lawrence Seaway

Asserting that the fight against the St. Lawrence seaway project "has really just begun," Tom J. McGrath, executive director of the National St. Lawrence Project Conference, has issued a circular urging members to continue to make their opposition known to their congressmen. "The fact that the project has been converted into pork," Mr. McGrath said, "has changed the whole aspect of things, and it may have changed [some congressmen's] attitude toward the legislation."

In the latter connection Mr. McGrath pointed out how the House committee on rivers and harbors, at the request of President Roosevelt, has voted to include the St. Lawrence project in the omnibus rivers and harbors bill. "Reaction to the shocking and unprecedented action on the part of the President has been most unfavorable to the project," he went on, adding that "irrespective of the merits of the legislation the method by which its adoption is now sought has brought almost universal condemnation."

Suggests Changes in Tax Bill

R. V. Fletcher, vice-president and general counsel of the A. A. R., appeared before the Senate Finance Committee on August 13 and objected to the proposed 10 per cent tax on "adjusted excess profits net income" in the pending tax bill. He pointed out that this tax is to be levied only on corporations which compute their taxes on the "invested capital" basis, but that, inconsistently, the special 10 per cent tax is arrived at through the "average earnings" method. This tax, Mr. Fletcher demonstrated, bears with particular hardship on the railroad industry—which, while its earnings have increased, is nevertheless being put to heavy expense to provide facilities for defense traffic; and which, moreover, is heavily indebted to the government. If the carriers are spared this levy, they will be able to reduce their indebtedness to the government.

Mr. Fletcher also suggested that soldiers be exempt from the proposed tax of 5 per cent on railroad fares and that the commutation zone of exemption be increased from 30 to 60 miles.

OPACS Allocation Program for Air Conditioning Refrigerant

Allocation of available supplies of Freon refrigerant gases to users and manufacturers of civilian refrigeration and air-conditioning equipment, "including railroad cars," is directed in a program announced August 19 by the Office of Price Administration and Civilian Supply. "Heavy de-

fense needs for this basic chemical have caused a shortage in many of its derivatives," the OPACS announcement said.

A senior classification is assigned in the program to maintenance of all types of refrigerating equipment now operating and existing air-conditioning equipment in hospitals, clinics, and sanatoria requiring Freon refrigerants. Maintenance of industrial air-conditioning equipment already installed, including that of the railroads, ranks next in preference, followed by maintenance of other air-conditioning equipment, then by manufacture of new refrigeration and air-conditioning equipment. "Current supplies of Freon," OPACS said, "are expected to be adequate for the maintenance of all installed refrigeration and air-conditioning equipment, but some deliveries for new units may have to be deferred until the summer ice cream and air-conditioning season is passed."

Equipment on Order

Class I railroads on August 1, had 89,416 new freight cars on order, according to the Association of American Railroads. On July 1, they had 92,566 on order, and on August 1, last year, there were 19,765. The new cars on order on August 1, this year included 57,742 box, 26,980 coal, 100 stock, 2,060 flat, 1,350 refrigerator and 1,184 miscellaneous cars.

Class I roads on August 1 also had 603 new locomotives on order, of which 300 were steam and 303 electric and Diesel-electric. On July 1, there were 559 new locomotives on order, of which 265 were steam and 294 were electric and Diesel-electric. New locomotives on order on August 1, last year, totaled 168 which included 115 steam and 53 electric and Diesel-electric.

In the first seven months of 1941, the railroads put in service 43,243 new freight cars compared with 40,416 in the same period last year. Of the total number of new freight cars placed in operation in the first seven months this year, there were 22,299 box, 18,503 coal, 1,228 flat, 999 refrigerator, 50 stock and 164 miscellaneous cars. In the first seven months this year, the railroads also put in service 323 locomotives, of which 75 were steam and 248 electric and Diesel-electric. Installed in the first seven months last year were 201 new locomotives, of which 58 were steam and 143 electric and Diesel-electric.

Freight cars and locomotives leased or otherwise acquired are not included in the above figures.

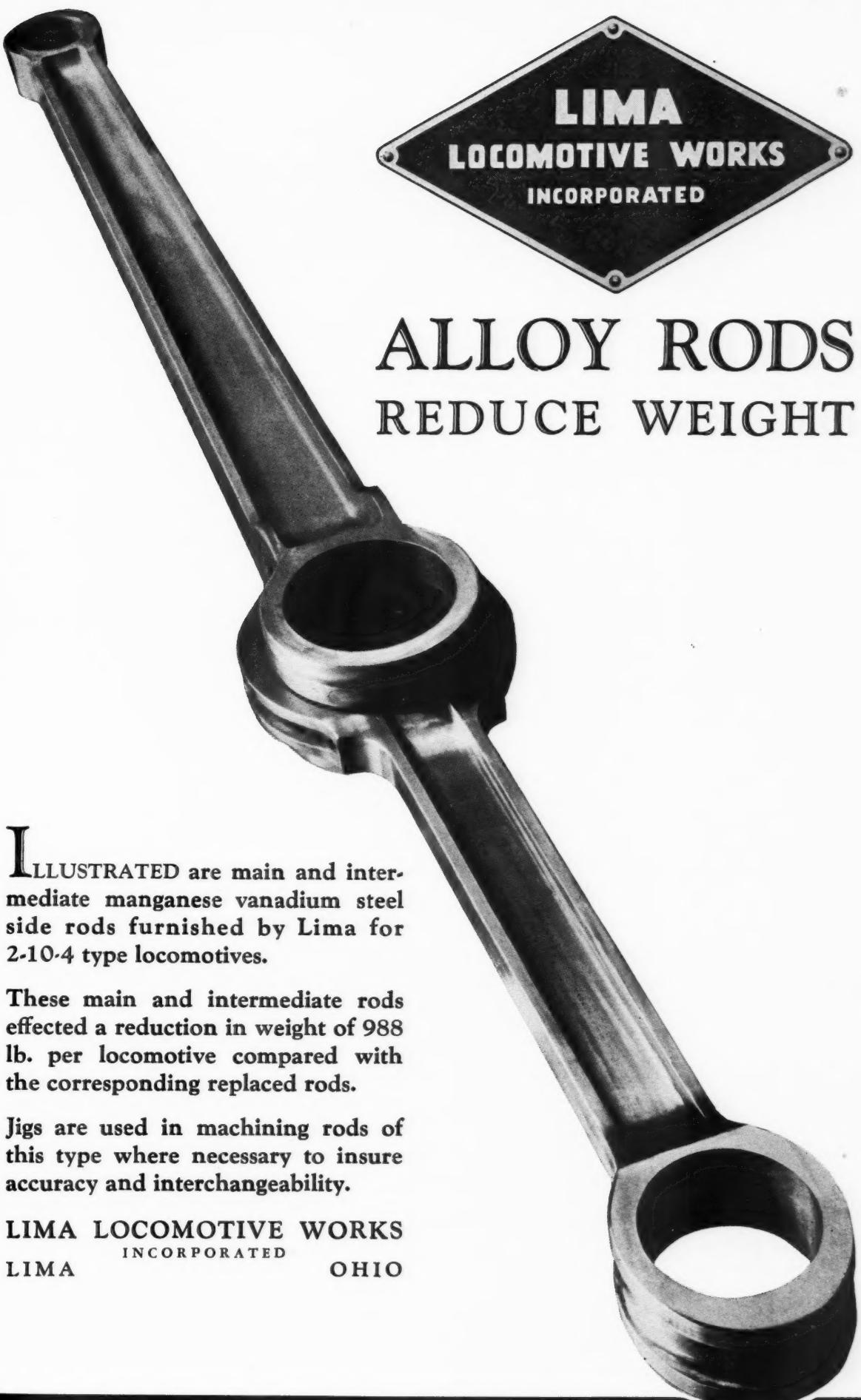
U. S. Chamber of Commerce Aiding Car Efficiency Drive

Suggestions as to how local groups may aid in the freight-car-efficiency drive are embodied in a circular prepared by Colonel A. B. Barber, manager of the U. S. Chamber of Commerce's Transportation and Communication Department, and sent recently to 1,200 chamber of commerce and several hundred trade associations and other organizations.

"The main objective," the circular said, "is, by combined efforts of shippers and carriers, to reduce average freight car turnaround below the present 12.5 days before the shipping peak comes this fall. Re-



ALLOY RODS REDUCE WEIGHT



LLLUSTRATED are main and intermediate manganese vanadium steel side rods furnished by Lima for 2-10-4 type locomotives.

These main and intermediate rods effected a reduction in weight of 988 lb. per locomotive compared with the corresponding replaced rods.

Jigs are used in machining rods of this type where necessary to insure accuracy and interchangeability.

**LIMA LOCOMOTIVE WORKS
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LIMA **OHIO**

duction of this average time by less than one-tenth will, according to the best estimates, remove any danger of car shortage. Such reduction is easily obtainable by concerted efforts and its effects will be augmented by heavier loading and other aids to car efficiency."

The circular goes on to suggest types of activity which might be undertaken, and to give examples of desirable organization set-ups. In the latter connection there is an explanation of the organization and activities of the Freight Car Efficiency Committee recently formed in Washington, D. C. Then comes lists of aids to car efficiency efforts, and of available publicity and promotional material. "All indications of progress in the campaign are encouraging and there is every reason for confidence that the problem can be 'licked,'" the circular says in closing. It warns, however, that traffic demand "is not accurately predictable and it is therefore of the greatest importance that all practicable measures be taken to save car days in the event that demand should increase unexpectedly."

Rio Grande Introduces "Pocket Streamliner"

F. E. Gimlett of Arbor Villa, Colo., a 76-year-old gold prospector dressed in picturesque working clothes and sporting a full beard, served to introduce a new two-car "pocket streamliner" for the Denver & Rio Grande Western to the press of New York and Philadelphia, Pa., on August 19. Dubbed "The Prospector," the new train made test runs between the Budd plant at Philadelphia and West Trenton, N. J., over the Reading, with D. & R. G. W. and other railroad officers aboard, during the week of August 11. On August 19 a special run for the press and invited railroad officers was made over the Central of New Jersey and Reading between Jersey City, N. J., and West Trenton.

Both "prospects" created quite a stir. Installed for several nights at the Waldorf-Astoria hotel, New York, Mr. Gimlett cut a conspicuous figure as he stalked

through carpeted lobbies and cafes. He especially enjoyed telling people that he saw the first Rio Grande passenger train to run over the Transcontinental Divide.

The train consists of two Diesel-electric cars with capacity for 62 passengers, accommodations including reclining seat coach section, eight upper and lower berths, two "chambrettes," buffet and dining section and observation-lounge. It and its twin "Prospector" are especially designed for over-night service between Denver and Salt Lake via the Moffett tunnel, with power capacity for speed on heavy grades. The train left Philadelphia on the morning of August 20 for Denver with routing via the Pennsylvania and St. Louis, Mo.

Senate Passes New Defense Highway Bill

With Republican Senator Vandenberg of Michigan making a "stand-by-the-President" appeal and forcing a cut of \$50,000,000 in the total amount authorized, the Senate on August 15 passed S. 1840, the "national defense" highway bill sponsored by Senators McKellar of Tennessee and Hayden of Arizona. Democrats, as a substitute for the similar bill which was vetoed recently by President Roosevelt. The bill as passed by the Senate authorizes appropriations of \$25,000,000 to be spent as the President sees fit for bridges on strategic roads, and of \$50,000,000 to be spent on the basis of the usual federal-aid apportionment formula on the improvement of strategic roads.

The vetoed bill carried \$125,000,000 for the strategic roads, all to be apportioned on the basis of the federal-aid formula, although the President had asked for only \$25,000,000. The veto message objected particularly to the apportionment requirement; and Senator Vandenberg asserted that proponents of the substitute were in effect saying: "All right, we'll let you have the \$25,000,000, which you say is all we need, provided you give us an extra \$100,000,000 which we can scatter around

through the states . . ." It was the latter figure that Senator Vandenberg's amendment later cut to \$50,000,000, as noted above. The bill as a whole would authorize appropriations totaling approximately \$195,000,000, including, in addition to the foregoing, an item of \$100,000,000 for access roads to camps and other defense facilities.

A. A. R. Recommends Multiple Loading of Carload Freight

Vice-Presidents C. H. Buford and A. F. Cleveland of the Association of American Railroads have addressed a joint circular to all operating and traffic officers, recommending that every effort be made to induce shippers to use individual cars for multiple loads "to the fullest extent that the nature of their business and the volume of their orders may reasonably permit." The appeal is "in the interest of car conservation and the obtaining of maximum use of existing equipment."

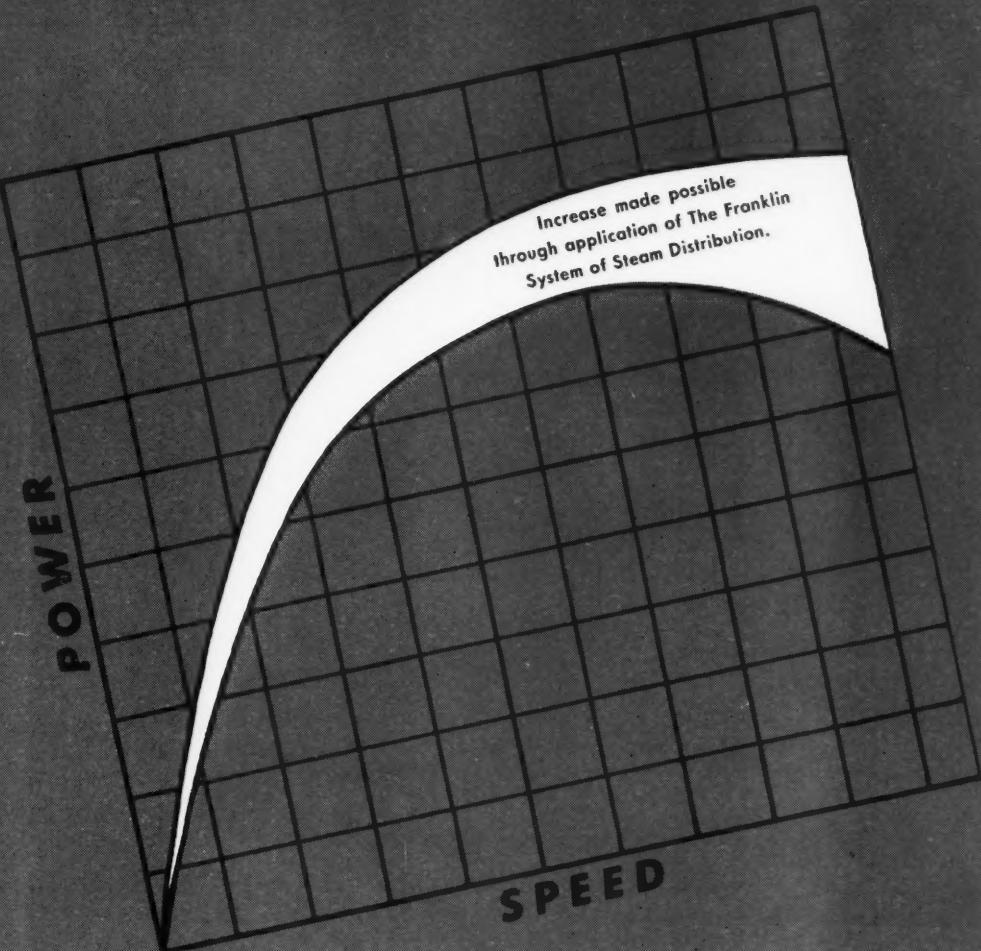
An accompanying circular from W. C. Kendall, chairman of the Car Service Division, points out that double and triple loading "is not new—it was practiced to a considerable extent during the last World War"; and "it is a very productive means by which freight cars may be conserved and the supply augmented."

The Buford-Cleveland circular embodies detailed instructions governing the double and triple loading, and states that "many opportunities are present for loading in one car two or more carload shipments, each of which being subject to the same minima and rates as if loaded separately." Among other rules which the circular sets forth is one stipulating that: "Two or three carload consignments of freight, except bulk freight, for the same or separate destinations, may be placed in one car of sufficient size and capacity and be billed as though a separate car was furnished for each shipment. If for two or more destinations, intervening consignments must be to agency stations directly intermediate to the final destination." Charges are comput-



The Denver & Rio Grande Western's New "Prospectors" Will Go Into Operation Between Denver, Col., and Salt Lake City, Utah, on September 8. Each of the Two Cars is Powered by Diesel-Electric. Budd is the Manufacturer.

Continued on next left-hand page



RELEASE THE LATENT POWER ...for useful work

THE
FRANKLIN
 SYSTEM
 OF
 Steam
 Distribution

The steam locomotive has always possessed a substantial latent power that has hitherto been unavailable. Now, this power is fully released by THE FRANKLIN SYSTEM OF STEAM DISTRIBUTION.

In new locomotives there is available 30 to 40% more Horsepower for revenue work—simply by removing the Piston Valves and Valve Gear and applying THE FRANKLIN SYSTEM OF STEAM DISTRIBUTION.

This large increase is accomplished without increasing the size of the locomotive, fuel or water, boiler pressure, cylinder diameter, etc. Investigate the applicability of THE FRANKLIN SYSTEM OF STEAM DISTRIBUTION to your new or existing locomotives.



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

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ed "on the basis of the carload rate and actual weight, subject to the minimum carload weight on each shipment."

Various other instructions are also given, such as those governing the issuance of waybills, marking of consignments, restrictions on diversions and reconsignments, application of switching and lighterage charges, supervision of unloading by agents, handling of arrival notices, restrictions on "shippers' order" billings, etc.

May Bus Revenues 33.2 Per Cent Above 1940

Class I motor carriers of passengers reported May revenues of \$11,782,862, as compared with \$8,846,668 in May, 1940, an

growing army. This has dislocated and disturbed old-fashioned channels of distribution and placed increased burdens upon existing car supply. The essential nature of this service is obvious."

OPM Recommends Construction of 25 Great Lakes Ore Boats

Construction of an emergency Great Lakes fleet of 25 iron ore boats at an estimated cost of \$50,000,000 has been recommended to the United States Maritime Commission by the Office of Production Management. John D. Biggers, OPM director of production, advised the commission that the boats would be needed to transport ore for the 6,508,950 tons of

District and carrier	Passenger revenue		Passengers carried	
	May 1941	May 1940	May 1941	May 1940
New England Region	\$542,808	\$399,406	1,218,364	940,504
Middle Atlantic Region	1,497,099	1,283,613	2,869,784	2,528,117
Central Region	1,973,305	1,603,065	3,110,776	2,605,085
Southern Region	3,067,867	2,023,849	4,022,347	2,539,451
Northwestern Region	390,058	338,931	328,866	294,636
Mid Western Region	996,245	816,608	736,379	573,929
Southwestern Region	1,552,464	1,116,541	1,794,712	1,135,511
Rocky Mountain Region	103,339	92,301	76,416	74,824
Pacific Region	1,659,677	1,172,354	2,186,866	1,368,547

increase of 33.2 per cent, according to the latest compilation prepared by the Interstate Commerce Commission's Bureau of Statistics from 147 reports representing 148 bus operators. Passengers carried increased 35.5 per cent, from 12,060,604 to 16,344,510.

The breakdown by regions of the bus revenue and traffic figures, which exclude data on charter or special party service, is given in the accompanying table.

Kendall Calls for Efficient Use of Refrigerator Cars

Reminding railroads and refrigerator car lines that the next 30 or 40 days will bring the year's maximum demand for refrigerator cars, W. C. Kendall, chairman of the Car Service Division, in an August 18 circular, urged all interests concerned to expedite the handling of such cars and thus "manufacture car days by increased efficiency." Mr. Kendall suggested nine steps which might be taken to bring about the foregoing result, and said that copies of the circular might well be distributed by the railroads and car lines to their customers "with a word of their own urging full cooperative effort."

The larger share of the refrigerator-car traffic, Mr. Kendall pointed out, originates on the Pacific Coast, in Florida and Texas and requires a long rail haul to the principal consuming territory. He added: "Long empty movements are involved in building up and maintaining the necessary supply in distant originating territory. Maximum possible speed is absolutely essential in all of the operations involved—loading, transportation, unloading and empty return. Only by this means can the available car supply be employed to its utmost capacity. And 'utmost capacity' is essential to fully protect impending requirements. A new factor in the refrigerator car supply problem this year is the huge increase in the volume of supplies necessary for the maintenance of a fast

additional annual pig iron capacity which the OPM recommended recently.

The boats would have a net carrying capacity of 12,000 to 13,000 long tons each; and their combined yearly capacity, on the basis of 30 trips per season, is estimated at 8,750,000 long tons or 9,800,000 net tons. It is planned to have the fleet ready by the beginning of the 1943 navigation season; while an additional and larger ore-boat program "will be necessary" if OPM approves "a major over-all expansion of the steel industry, such as it now has under consideration."

Meanwhile, Defense Transportation Commissioner Ralph Budd has announced that the movement of iron ore on the Great Lakes during July totaled 11,390,485 long tons, "setting an all-time record for any single month." The figure exceeds by more than 300,000 tons the previous record established in May and compares with a movement of 10,534,431 long tons during July of last year. Reports through the week ended August 2 from the four principal ore-handling railroads showed that they have loaded into boats at upper lake ports this season a total of 39,492,552 gross tons of iron ore as compared with 27,386,727 tons during the corresponding period of 1940—an increase of 12,105,825 tons.

Budd After Old Rails

Steps are being taken to scrap street car and railroad rails which have been abandoned and left imbedded in city streets, Ralph Budd, defense transportation commissioner announced on August 15. The purpose is to make the rails available to steel industries "urgently needing additional scrap iron and steel for defense production."

More than 232,000 tons of scrap iron are imbedded in city streets, it is indicated by a survey made by Charles Gordon, urban transportation consultant on Mr. Budd's staff. The survey covered

members of the American Transit Association of which Mr. Gordon is managing director. The announcement also said that "a plan is under consideration whereby the Works Projects Administration would aid in providing the necessary funds for removing the rails and making necessary repairs to the streets involved."

At the same time the Office for Emergency Management has asked the railroads to check their entire systems and make available quickly all possible scrap. As noted in the *Railway Age* of August 9, page 249, the railroads have since April been engaged in just such a scrap cleanup drive in connection with their efforts to cooperate with the Office of Production Management. OEM now asks the carriers to consider especially the following suggestions:

1. Remove railroad sidings, branch lines and industrial tracks where they are not actually needed for present or prospective business. Appropriate action by public bodies is requested to facilitate this program.

2. Check equipment and dismantle promptly cars and locomotives that are not to be repaired.

3. Check miscellaneous facilities such as junk tools, bridges and buildings and dismantle those no longer needed to the extent necessary to make available all metal for scrap.

Representation of Employees

The National Mediation Board has issued a report certifying results of an election on the Delaware, Lackawanna & Western where the Railway Patrolmen's Union, American Federation of Labor, has been "duly designated and authorized" to represent patrolmen (sergeants) in that road's police department.

P. R. R. Motive Power Officer Awarded 50-Year Button

To mark completion of a half century of service with the Pennsylvania, Rudolph L. Kleine, assistant chief of motive power—car, with headquarters at Philadelphia, Pa., was presented with a 50-year gold button on August 18 by H. W. Jones, chief of motive power. Mr. Kleine's entire service has been spent in motive power work and nearly all of it has been devoted to the design, construction and repairing of freight and passenger cars. After finishing his education at the Philadelphia Manual Training High School and at Drexel Institute, he entered the service of the Pennsylvania at Philadelphia on August 17, 1891, in the office of the superintendent of motive power of the Philadelphia, Baltimore & Washington, now the Southern General division. He was later appointed draftsman, and after being transferred to freight and passenger car repair work in the Wilmington (Del.) shops was promoted to foreman in 1900. He became general foreman of the Maryland division the following year, and one year later was transferred to Altoona, Pa., where he served successively as general car inspector, assistant chief car inspector and chief car inspector. He was advanced to assistant chief of motive power—car, of the Pennsylvania, with headquarters in Philadelphia, on March 1, 1920.

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NO. 147 OF A SERIES OF FAMOUS ARCHES OF THE WORLD

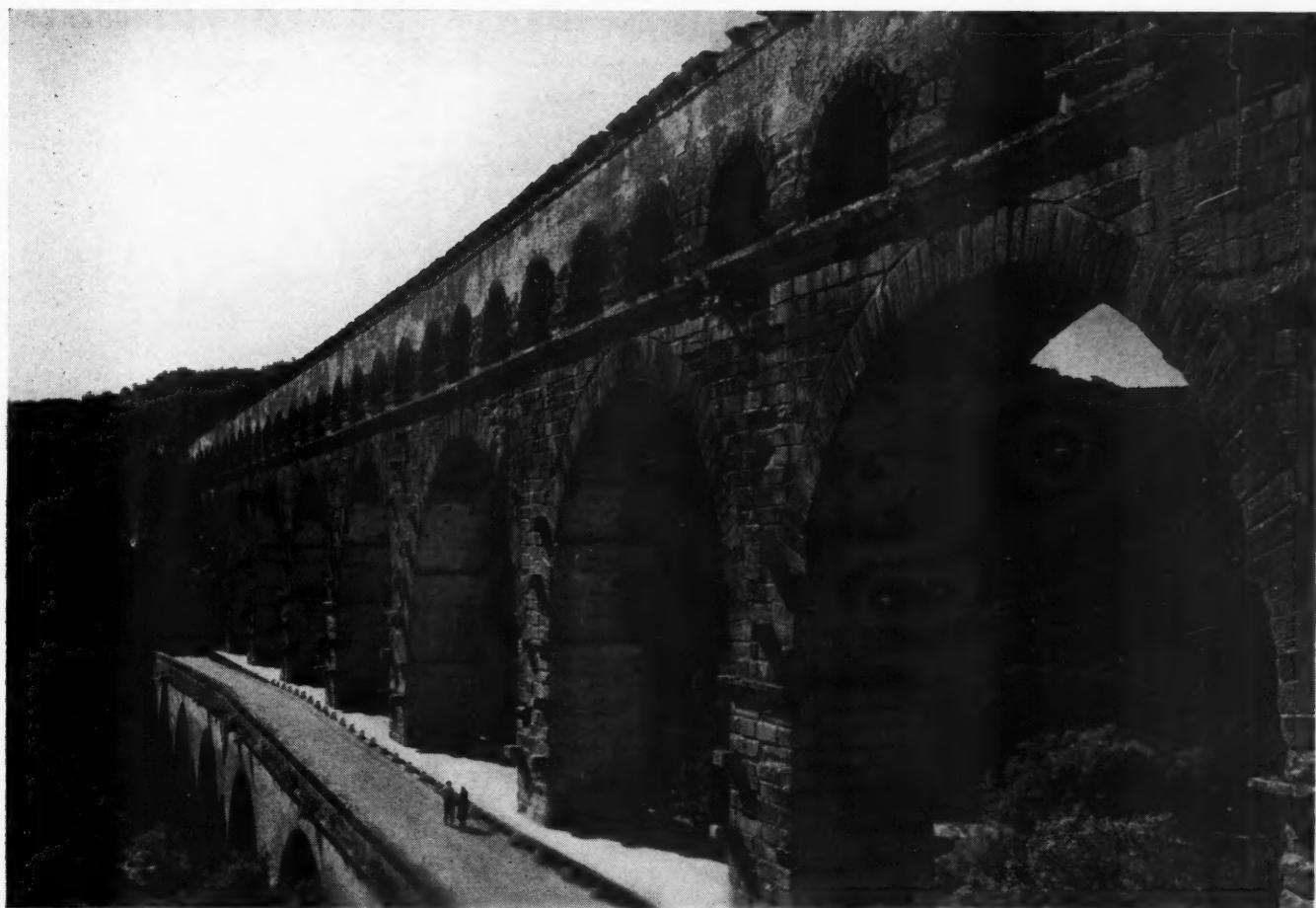


Photo Courtesy of Samuel Chamberlain

**PONT DU GARD
NIMES, FRANCE**

Built over two thousand years ago, the majestic Pont du Gard is one of the finest of all Roman aqueducts. An unusual feature of the structure is the three arcades, placed one above the other, their total height from the river to the top parapet being 155 ft. The arches in the two lower arcades are exceptionally large for a work of this type, ranging from 65 to 80 ft. The roadway in the lower part of the picture is an addition to the original

structure and was completed in 1747.

* * * * *

Less majestic but much more practical is the Security Sectional Arch. Over the past 32 years it has been continuously developed and improved to keep pace with modern power . . . thus assisting American Railroads in a *practical* way — by lowering fuel consumption and increasing boiler capacity.

There's More to SECURITY ARCHES Than Just Brick

**HARBISON-WALKER
REFRACTORIES CO.**
Refractory Specialists



**AMERICAN ARCH CO.
INCORPORATED**
60 EAST 42nd STREET, NEW YORK, N. Y.
***Locomotive Combustion
Specialists***

Construction

CHESAPEAKE & OHIO.—This company has awarded contracts to Haley, Chisholm & Morris, Inc., of Charlottesville, Va., for construction work in connection with line changes at Frazier, W. Va., at estimated cost of \$118,000, and at Prestonsburg, Ky., at estimated cost of \$92,360.

LOUISVILLE & NASHVILLE.—A contract will soon be awarded for the replacement of wooden roadways with concrete roadways in the shop yard at South Louisville, Ky. The work will cost more than \$20,000.

MEXICO.—Preliminary surveys and studies are being carried out to determine a location and the cost of construction of a connecting stretch of railroad between Creel, Chihuahua, and San Pedro, Sin., to provide a through route for the Kansas City, Mexico & Orient to the west coast of Mexico. The Railroad Construction section of the Department of Communications of the Mexican Government advises, however, that no money is available at this time for construction.

The construction of the line between Calzontzin and Apalzingan in Michoacan, 78.9 miles long, has been practically completed, with the exception of station buildings, yards and sidings and the terminal at Apalzingan, which are scheduled to be completed by September 15. Regular service will be officially inaugurated on that date.

PENNSYLVANIA.—This company has awarded a contract for the air-conditioning of a restaurant in its station at Pittsburgh, Pa., at estimated cost of \$15,000, to the W. F. Trimble & Sons Company of Pittsburgh.

PERE MARQUETTE.—A contract amounting to approximately \$25,000 has been awarded the Jutton-Kelly Company, Detroit, Mich., for the reconstruction of bridge L-33.1 near North Bradley, Mich.

THE UNITED STATES GOVERNMENT, Bureau of Reclamation, Sacramento, Cal., is asking for bids, September 4, for the construction of a locomotive fuel-supply station at siding No. 1, Southern Pacific relocation, Kennett division, Central Valley project, Cal. The work will include excavation; backfill; concrete; placing 11,000 lbs. of reinforcement bars; constructing powerhouse; and furnishing and installing fuel-oil handling and heating equipment. The materials will be furnished in part by the Government.

UNION RAILROAD.—This company has authorized the construction of a yard office at Duquesne, Pa., at estimated cost of \$25,000.

VIRGINIAN.—This company has awarded a contract for the construction of a sub-structure for its bridge over the Guyandot river in Wyoming County, W. Va., at estimated cost of \$30,000, to the Boxley Brothers Company, Inc.

Financial

BOSTON & MAINE.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon a line extending from Whitefield Junction, N. H., to Lancaster, 12 miles.

CHICAGO & NORTH WESTERN.—*Abandonment.*—Examiner A. G. Nye has recommended in a proposed report that the Interstate Commerce Commission authorize this road to abandon its 102.6-mile line from Linwood, Nebr., to Hastings. Loss of traffic to highway carriers is the principal reason for the plight of the line on which, the examiner says, "applicant has continued to suffer losses which it can ill afford to sustain." With all stations situated on hard or gravel-surfaced highways, the examiner found nothing of record to indicate that the traffic now being handled by motor trucks can be recovered, or that any industries will locate within the area and furnish a sufficient volume of business to warrant keeping the line in operation. "The line," Mr. Nye said, "exists mainly for the transportation of certain commodities where rate advantages can be had, or for the movement of wheat when transportation demands are greatest." He also said that many of those protesting the proposal "use motor trucks for the receipt and delivery of merchandise." With respect to employees affected, the examiner would have the commission retain jurisdiction pending the outcome of the Pacific Electric case which is now before the Supreme Court on the question of the commission's authority to impose labor-protection conditions in abandonment proceedings.

ILLINOIS CENTRAL.—*Abandonment.*—This road has applied to the Interstate Commerce Commission for authority to abandon a 10.4-mile line extending from a point near Belleville, Ill., to North Dupo; and to abandon operations over the line's remaining 3.2-miles between North Dupo and the Mississippi river.

NORTHWESTERN PACIFIC.—*Abandonment.*—This road has been authorized by the Interstate Commerce Commission, Division 4, to abandon a 6.3-mile line extending from a point near Glen Ellen, Calif., to a point near Los Guilicos.

Average Prices of Stocks and Bonds

	Last Aug. 19	week	Last year
Average price of 20 representative railway stocks.	29.12	30.35	28.20
Average price of 20 representative railway bonds.	64.61	65.23	56.50

Dividends Declared

Boston & Albany.—\$2.00, quarterly, payable September 30 to holders of record August 30. **Cincinnati, New Orleans & Texas Pacific.**—5 Per Cent Preferred, \$1.25, quarterly, payable September 2 to holders of record August 15. **Pittsburgh, Youngstown & Ashtabula.**—7 Per Cent Preferred, \$1.75, quarterly, payable September 2 to holders of record August 20.

Virginian.—Common, 62½¢, payable September 25 to holders of record September 16; 6 Per Cent Preferred, 37½¢, quarterly, November 1 to holders of record October 18. Quarterly dividends of 37½¢ have also been declared on the 6 Per Cent Preferred for the periods February 2, 1942, to holders of record January 17, 1942; May 1, 1942, to holders of record April 18, 1942; and August 1, 1942, to holders of record July 18, 1942.

Equipment and Supplies

U. P. Buys 25 Diesel-Switchers

The Union Pacific has placed an order for 25 Diesel-electric switching locomotives of 1,000-hp. each, for use in important terminals, with the Electro-Motive Corporation. Each of the locomotives will be nearly 45-ft. long, weigh 125 tons and be equipped with one General Motors Diesel engine of twelve cylinders. Delivery is expected at the rate of six locomotives per month beginning in April, 1942. Cost of the order is estimated at about \$2,000,000.

Santa Fe Spends \$7,000,000 for Diesel Freight Locomotives

The Atchison, Topeka & Santa Fe has placed the largest single order for Diesel-electric freight power in the history of this equipment with the purchase of 15 locomotives of 5,400-hp. each from the Electro-Motive Corporation, at total estimated cost of about \$7,000,000. Each of the 15 locomotives will comprise four sections of 1,350-hp. each. These locomotives are in addition to five 5,400-hp. units for this road, two of which were ordered last year and are now in service, and three of which were ordered earlier this year (reported in the *Railway Age* of March 1 and April 12) and are now being delivered. When the additional 15 units are placed in service, the Santa Fe will have a fleet of Diesel-electric freight locomotives having a combined total of 108,000-hp.

SIGNALING

THE SEABOARD AIR LINE has placed an order with the Union Switch & Signal Co. for materials required for an extensive installation of centralized traffic control between Richmond, Va., and Alberta, a distance of 63 miles, comprising 9 miles of double track and 54 miles of single track. The control machine will be equipped with automatic traingraph and located at Raleigh, N. C., 160 miles south of Richmond. The centralized traffic control line circuit will be arranged for voice communication over the entire distance between Richmond and Raleigh. Coded detector track circuits will be used generally throughout. The installation work will be carried out by the railroad's regular construction forces.

FREIGHT CARS

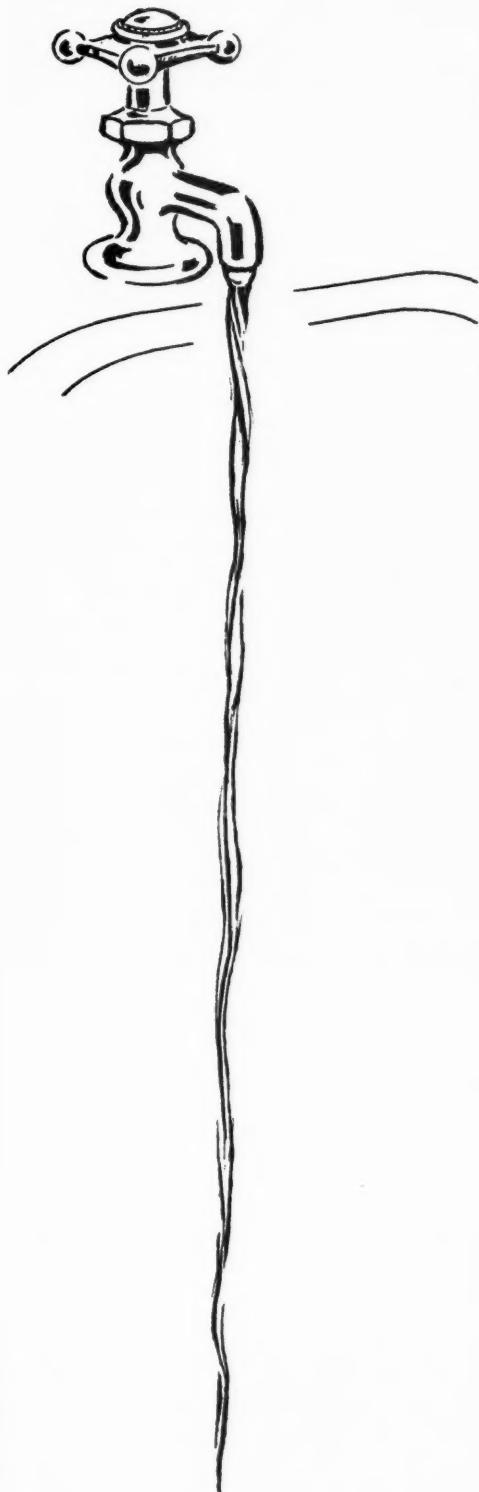
THE UNITED STATES ARMY, Engineering Department, has ordered three tank cars from the General American Transportation Corporation at cost of \$11,335.

THE ATCHISON, TOPEKA & SANTA FE has ordered 200 70-ton tank cars of 16,000-gal. capacity and 75 70-ton steel hopper cars from the General American Transportation Corporation.

THE GENERAL AMERICAN TRANSPORTATION CORPORATION has been authorized by the Interstate Commerce Commission, in

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The Invisible Part

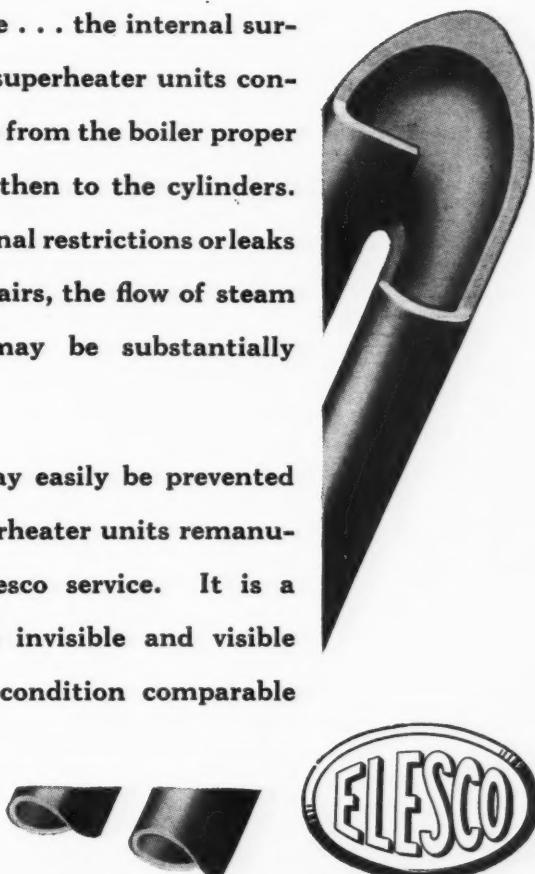


is important

Invisible to the eye . . . the internal surfaces of the water pipe convey the flow of water to the faucet. Either through internal restrictions or leaks, the flow of water at the faucet may be reduced.

Invisible to the eye . . . the internal surfaces of locomotive superheater units convey the flow of steam from the boiler proper to the throttle and then to the cylinders. Either through internal restrictions or leaks caused by patch-repairs, the flow of steam at the cylinders may be substantially reduced.

This condition may easily be prevented by having your superheater units remanufactured by the Elesco service. It is a guarantee that the invisible and visible parts will be in a condition comparable to new.



A-1425

SUPERHEATERS • FEEDWATER HEATERS
AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE
SUPERHEATER
C O M P A N Y

Representative of
AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street • NEW YORK
122 S. Michigan Avenue • CHICAGO

Montreal, Canada
THE SUPERHEATER COMPANY, LTD.

a report by Commissioner Johnson, to construct for experimental service in the transportation of sulfuric acid 25 tank cars with tanks of riveted toncan iron.

THE SOUTHERN PACIFIC has authorized the building of additional freight car equipment in the company's own shops for 1941 and 1942 delivery as follows:

130 70-ton flat cars
10 70-ton depressed center flat cars
90 70-ton drop end gondola cars
165 cabooses

LOCOMOTIVES

THE BETHLEHEM STEEL COMPANY has ordered five 50-ton Diesel-electric locomotives of 300-hp. each from the Whitcomb Locomotive Company.

THE UNITED STATES WAR DEPARTMENT has ordered one 45-ton Diesel-electric locomotive of 250-hp. and ten 20-ton gaso-

line-mechanical locomotives of 190-hp. each from the Whitcomb Locomotive Company.

THE SHEFFIELD STEEL CORPORATION of Texas has ordered two 50-ton Diesel-electric locomotives of 320-hp. each from the Whitcomb Locomotive Company.

THE UNITED STATES ARMY, Edgewood arsenal, has ordered one 65-ton Diesel-electric locomotive from the General Electric Company.

THE WESTINGHOUSE ELECTRIC & MANUFACTURING CO. has ordered one 50-ton Diesel-electric locomotive of 300-hp. from the Whitcomb Locomotive Company.

IRON AND STEEL

THE BANGOR & AROOSTOOK has placed an order for 3,190 tons of rail with the Bethlehem Steel Company.

Supply Trade

The American Steel & Wire Co., U. S. Steel Corporation subsidiary, plans for additional coke production to help in meeting the increasing demands of national defense by putting into operation its entire Duluth, Minn., coke works, consisting of ninety 12½ ton Koppers ovens, of which approximately half have been in operation. The full unit, which is expected to be in operation by September 10, will turn out nearly 35,000 tons of coke a month and the additional coke thus produced will be shipped to the Carnegie-Illinois Steel Corporation at Chicago.

Thomas Waddell Gangloff, technical manager of the Hazard Insulated Wire Works division of the Okonite Company, died August 10 in Wilkes-Barre, Pa. He was 49 years of age.

Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 133 Monthly Reports of Revenues and Expenses Representing 137 Class I Steam Railways
(Switching and Terminal Companies Not Included)

FOR THE MONTH OF JUNE, 1941 AND 1940

Item	United States		Eastern District		Southern District		Western District	
	1941	1940	1941	1940	1941	1940	1941	1940
Miles of road operated at close of month	232,140	232,837	57,233	57,368	44,126	44,342	130,781	131,127
Revenues:								
Freight	\$377,533,941	\$280,682,048	\$163,906,515	\$120,862,703	\$74,065,130	\$55,534,796	\$139,562,296	\$104,284,549
Passenger	44,832,137	35,936,132	22,825,507	19,497,464	6,411,344	4,149,332	15,595,286	12,289,336
Mail	8,675,120	8,081,122	3,190,364	3,074,890	1,452,616	1,348,739	4,032,140	3,657,493
Express	5,182,035	4,338,917	2,232,624	2,175,511	848,355	659,886	2,101,056	1,503,520
All other operating revenues	18,799,489	15,914,570	9,264,529	7,792,216	2,121,743	1,796,828	7,413,217	6,325,526
Railway operating revenues	455,022,722	344,952,789	201,419,539	153,402,784	84,899,188	63,489,581	168,703,995	128,060,424
Expenses:								
Maintenance of way and structures	52,532,563	45,302,346	21,090,155	17,048,695	8,647,671	7,694,874	22,794,737	20,558,777
Maintenance of equipment	80,939,704	65,854,879	37,646,353	29,540,552	14,815,849	12,864,862	28,477,502	23,449,465
Traffic	9,420,912	9,311,029	3,394,696	3,432,817	1,743,493	1,736,952	4,282,723	4,141,260
Transportation—Rail line	140,866,508	117,575,535	65,155,167	54,069,192	23,337,290	19,561,434	52,374,051	43,944,909
Transportation—water line	319,666	562,393	.....	.....	.....	.....	319,666	562,393
Miscellaneous operations	3,788,824	3,197,812	1,619,358	1,399,893	453,327	366,879	1,715,527	1,431,040
General	11,416,605	11,125,680	4,350,425	4,612,009	2,211,370	2,147,884	4,854,810	4,365,787
Transportation for investment—Cr. Railway operating expenses	351,738	422,251	66,069	39,913	78,151	94,338	207,518	288,000
Railway operating expenses	298,932,432	252,507,423	133,190,085	110,063,245	51,130,849	44,278,547	114,611,498	98,165,631
Net revenue from railway operations	156,090,290	92,445,366	68,229,454	43,339,539	33,768,339	19,211,034	54,092,497	29,894,793
Railway tax accruals	51,524,992	33,692,463	22,549,559	14,444,415	12,583,249	7,550,516	16,392,204	11,697,532
Railway operating income	104,565,298	58,752,903	45,679,915	28,895,124	21,185,090	11,660,518	37,700,293	18,197,261
Equipment rents—Dr. balance	8,600,102	7,814,383	4,110,324	4,058,879	72,512	165,234	4,417,266	3,590,270
Joint facility rent—Dr. balance	2,703,824	2,847,737	1,423,307	1,519,741	326,387	360,994	954,130	967,002
Net railway operating income	93,261,372	48,090,783	40,146,284	23,316,504	20,786,191	11,134,290	32,328,897	13,639,989
Ratio of expenses to revenues (per cent)	65.7	73.2	66.1	71.7	60.2	69.7	67.9	76.7
Depreciation included in operating expenses	18,076,011	17,146,355	7,917,092	7,445,377	3,633,708	3,454,921	6,525,211	6,246,057
Pay roll taxes	11,125,474	9,472,298	4,966,133	4,132,244	1,888,237	1,652,416	4,271,104	3,687,638
All other taxes	40,399,518	24,220,165	17,583,406	10,312,171	10,695,012	5,898,100	12,121,100	8,009,894

FOR SIX MONTHS ENDED WITH JUNE, 1941 AND 1940

	232,291	232,985	57,247	57,388	44,195	44,352	130,849	131,245
Miles of road operated at close of month*	232,291	232,985	57,247	57,388	44,195	44,352	130,849	131,245
Revenues:								
Freight	\$2,006,026,327	\$1,638,136,929	\$877,025,229	\$703,698,865	\$398,669,867	\$342,548,425	\$730,331,231	\$591,889,639
Passenger	237,372,966	196,919,318	121,699,767	106,686,618	42,672,448	31,488,081	73,000,751	58,744,619
Mail	51,837,488	48,882,790	19,271,555	18,674,517	8,969,155	8,437,882	23,596,778	21,770,391
Express	29,729,824	26,993,305	11,726,957	11,044,116	6,469,506	5,852,147	11,533,361	10,097,042
All other operating revenues	99,457,211	85,447,959	49,398,170	42,254,872	12,644,289	11,146,471	37,414,752	32,046,616
Railway operating revenues	2,424,423,816	1,996,380,301	1,079,121,678	882,358,988	469,425,265	399,473,006	875,876,873	714,548,307
Expenses:								
Maintenance of way and structures	263,685,437	232,707,039	105,809,308	89,323,480	48,552,639	44,760,435	109,323,490	98,623,124
Maintenance of equipment	460,853,038	397,177,736	214,449,680	176,859,898	86,026,309	79,442,177	160,377,049	140,875,661
Traffic	54,769,855	54,154,361	19,405,502	19,459,238	10,739,890	10,479,917	24,624,463	24,215,206
Transportation—Rail line	810,061,758	727,751,883	376,074,250	335,031,443	138,402,290	126,783,786	295,585,218	265,936,654
Transportation—water line	2,935,810	3,248,759	.....	.....	.....	.....	2,935,810	3,248,759
Miscellaneous operations	21,281,928	18,954,216	9,234,114	8,333,218	3,393,069	3,012,748	8,654,745	7,608,250
General	66,341,511	65,697,024	26,059,341	26,298,256	12,975,643	12,655,966	27,306,527	26,742,802
Transportation for investment—Cr. Railway operating expenses	1,580,441	1,840,618	257,714	305,316	369,689	385,298	953,038	1,150,004
Railway operating expenses	1,678,348,896	1,497,850,400	750,774,481	655,000,217	299,720,151	276,749,731	627,854,264	566,100,452
Net revenue from railway operations	746,074,920	498,529,901	328,347,197	227,358,771	169,705,114	122,723,275	248,022,609	148,447,855
Railway tax accruals	247,559,836	188,537,641	109,231,061	79,675,666	59,012,038	42,511,300	79,316,737	66,350,675
Railway operating income	498,515,084	309,992,260	219,116,136	147,683,105	110,693,076	80,211,975	168,705,872	82,097,180
Equipment rents—Dr. balance	48,465,292	48,248,466	23,636,384	23,172,945	2,386,458	2,851,599	22,442,450	22,223,922
Joint facility rent—Dr. balance	16,511,381	16,220,684	8,955,098	8,934,541	1,824,510	1,591,817	5,731,773	5,694,326
Net railway operating income	433,538,411	245,523,110	186,524,654	115,575,619	106,482,108	75,768,559	140,531,649	54,178,302
Ratio of expenses to revenues (per cent)	69.2	75.0	69.6	74.2	63.8	69.3	71.7	79.2
Depreciation included in operating expenses	107,277,750	102,072,285	47,109,330	44,289,289	21,635,178	20,643,049	38,533,242	37,139,947
Pay roll taxes	62,441,312	56,368,787	27,812,477	24,770,193	10,974,997	10,264,927	23,653,838	21,333,667
All other taxes	185,118,524	132,168,854	81,418,584	54,905,473	48,037,041	32,246,373	55,662,899	45,017,008

* Represents an average of the mileage reported at the close of each month within the period.
Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

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20

in Service

HIGH POWERED
*Articulated Freight
Locomotives on*

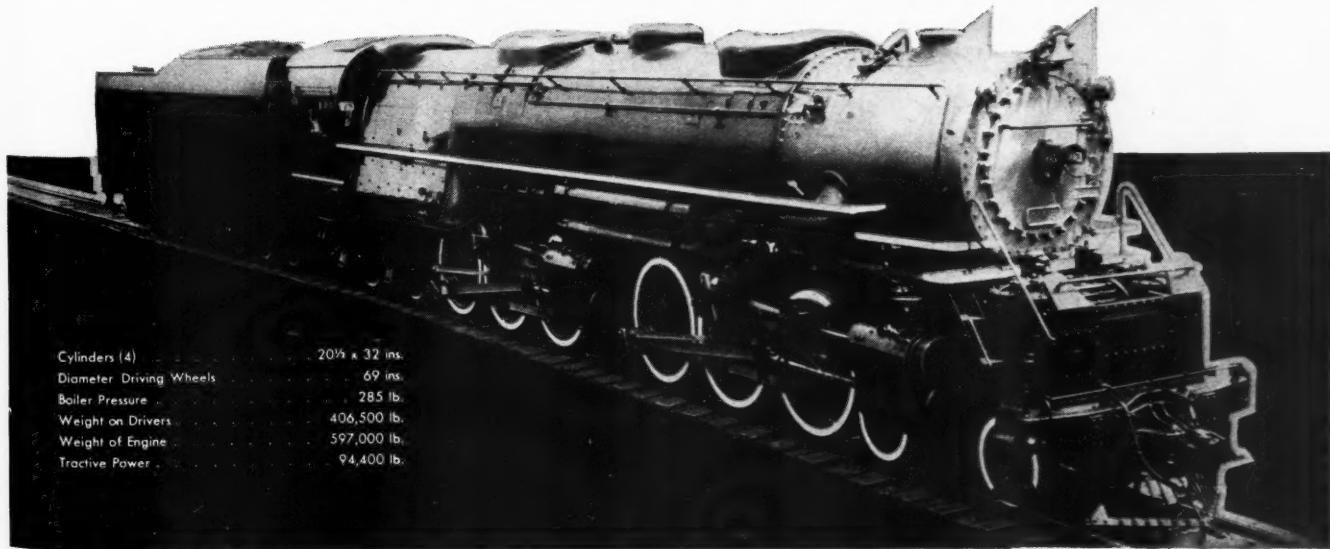


15 More On Order

JUST one year ago the Delaware and Hudson Railroad accepted delivery of 20 modern high-powered Alco locomotives. As a result of the unusual economies effected, the railroad has ordered 15 more. With 35 modern, high-speed, heavy tonnage engines in operation, the Delaware and Hudson will be prepared to meet all shippers' transportation needs with fast and most efficient service.

AMERICAN LOCOMOTIVE COMPANY
30 CHURCH STREET

NEW YORK, N. Y.



Cylinders (4)

Diameter Driving Wheels

20½ x 32 ins.

69 ins.

Boiler Pressure

285 lb.

Weight on Drivers

406,500 lb.

Weight of Engine

597,000 lb.

Traction Power

94,400 lb.

Railway Officers

EXECUTIVE

C. R. Snell has been appointed assistant to vice-president in charge of purchases and stores of the Canadian National, with headquarters at Montreal, Que., succeeding **Edwin A. Bromley**, whose promotion to general purchasing agent was reported in the *Railway Age* of August 16.

Robert C. Vaughan, president of the Canadian National and the Central Vermont, has been elected also president of the Grand Trunk Western. An article on the election of Mr. Vaughan to the presidency of the Canadian National appeared in the *Railway Age* of July 26, page 159.

MECHANICAL

Ralph W. Anderson, superintendent of motive power of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Milwaukee, Wis., will retire on September 1.

FINANCIAL, LEGAL AND ACCOUNTING

E. A. Kummer has been appointed real estate agent of the Baltimore & Ohio.

Charles Clark, commerce counsel, Southern, with headquarters at Washington, D. C., has been appointed general attorney, with the same headquarters.

S. J. W. Liddy, whose promotion to assistant comptroller of the Canadian Pacific at Montreal, Que., was reported in the *Railway Age* of August 9, entered railroad service with the Canadian Pacific in 1914, subsequently serving in the mechanical, maintenance and operating departments on eastern lines. Mr. Liddy was graduated from McGill University with an engineering degree in 1917. He joined the clerical staff of the accounting department of the Canadian Pacific at Montreal in



S. J. W. Liddy

1919, in the auditor of disbursements office. In 1925 he was promoted to chief clerk in charge of statistics in that department and the following year was advanced

to statistician. He was appointed general statistician in 1933 and two years later was promoted to assistant to the comptroller, the position he held until his recent promotion.

Louis A. McKeown, first associate city counselor for St. Louis, Mo., has been appointed attorney for the Terminal Railroad Association of St. Louis, a newly created position. Mr. McKeown will be assigned to special work in connection with a plan to simplify the corporate structure of the T. R. R. A.

Theodore C. Whiteman, superintendent safety and claims of the Bessemer & Lake Erie, with headquarters at Greenville, Pa., has been appointed general attorney, with the same headquarters. Mr. Whiteman was born on May 26, 1876, at Greenville and received his A. B. degree from Thiel College, Greenville, in 1897 and his LL.B. from the University of Pittsburgh in 1901. Mr. Whiteman entered



Theodore C. Whiteman

railroad service on June 1, 1901, serving in the legal department of the Bessemer & Lake Erie since that time.

OPERATING

W. G. Slaughter has been appointed director of safety and property protection of the Seaboard Air Line, with headquarters at Norfolk, Va., having jurisdiction over all matters of safety and property protection, including the special agents' department.

Frank G. Cook, assistant superintendent on the Northern Pacific at Spokane, Wash., has been promoted to superintendent of the Idaho division, with the same headquarters, succeeding **Fred Brastrup**, who has been granted a leave of absence because of illness.

Edward Gowdy, chief dispatcher on the Wyoming division of the Union Pacific, has been promoted to the newly created position of assistant superintendent in charge of transportation on that division, with headquarters as before at Cheyenne, Wyo. **W. E. Grimes** has been appointed trainmaster at North Platte, Neb.

George Prentice Neal, whose promotion to superintendent of signals and telegraph of the Chicago & Eastern Illinois, with headquarters at Danville, Ill., was

reported in the *Railway Age* of August 16, was born at Evansville, Ind., on July 14, 1890, and took short electrical engi-



George Prentice Neal

neering courses at Armour Institute of Technology, Chicago, and also studied a correspondence course. He entered railway service in February, 1910, with the Union Switch & Signal Co., on the Louisville & Nashville, later working several years for that company and for the General Railway Signal Company on various automatic signal installations on the Pennsylvania; the Chicago, Milwaukee, St. Paul & Pacific and the Chicago, Indianapolis & Louisville. In 1913 Mr. Neal entered the service of the C. & E. I., installing and maintaining automatic block signals on the Evansville and Chicago divisions. In April, 1918, he was advanced to signal inspector, with headquarters at Danville, which position he held until his recent promotion.

TRAFFIC

W. E. Ridgeway, whose appointment as general passenger agent in charge of solicitation of the Southern Pacific Lines in Texas and Louisiana, with headquarters at Houston, Tex., was reported in the *Railway Age* of August 9, was born in Pine Bluff, Ark., on January 29, 1888, and entered railway service in 1903, as an of-



W. E. Ridgeway

fice boy in the passenger department of the Southern Pacific at Houston. He later served in various clerical capacities and in 1906 he was appointed a purser for the



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Southern Pacific Steamship Lines, serving on various steamers. In 1908 he was promoted to traveling passenger agent for the Southern Pacific in Mississippi and was later advanced to city passenger agent at New Orleans, La. In 1920 he was appointed general agent for the freight, passenger and operating departments of the Southern Pacific's Morgan Line at Havana, Cuba, and in 1924 he was appointed operating assistant to the executive officer of the Southern Pacific Steamship Lines at New York. In 1928 Mr. Ridgeway was appointed assistant manager-operating department and general agent of the traffic department for the Morgan Line, with headquarters at Galveston, Tex., the position he held until his recent appointment.

E. E. Lindauer has been appointed general agent, freight department, New York Central at Syracuse, N. Y., instead of at New York, as erroneously reported in the *Railway Age* of July 12.

ENGINEERING & SIGNALING

A. T. Kinne, assistant division engineer on the Louisville & Nashville at Birmingham, Ala., has been promoted to division engineer, with headquarters at Nashville, Tenn., succeeding **R. A. Bryson**, who has been granted a leave of absence.

F. W. Pfleing, whose appointment as general signal engineer of the Union Pacific, with headquarters at Omaha, Neb., was reported in the *Railway Age* of August 9, was born at Terre Haute, Ind., on May 27, 1877, and graduated in electrical engineering from Rose Polytechnic Institute in 1901. He first entered railway



F. W. Pfleing

service in 1899 as a signal repair man on the Chicago & Eastern Illinois, working for a year prior to his graduation from college. In July, 1901, he went with the Union Pacific as a draftsman, later being appointed successively signal maintainer, inspector, foreman and general foreman. On January 1, 1903, Mr. Pfleing was promoted to signal supervisor at Cheyenne, Wyo., and in February, 1912, he was transferred to Kansas City, Mo. On July 1, 1912, he was promoted to signal engineer of the Union Pacific, with headquarters at Omaha. His jurisdiction was extended over all districts of the Union Pa-

cific System on January 1, 1936, which jurisdiction he continued to hold under his recent appointment.

OBITUARY

Josiah O. Apps, general executive assistant of the Canadian Pacific, with headquarters at Montreal, Que., died suddenly on August 13, at the age of 63. Mr. Apps was born on November 9, 1877, at Tara, Ont., and attended the public schools of Montgomery, Ala., and Chicago. He entered railroad service with the Illinois Central at Chicago at the age of 16 as



Josiah O. Apps

clerk in the local freight office. In 1896 he resigned and joined the staff of the Canadian Pacific in 1897 in the office of the general superintendent as stenographer. In March, 1903, Mr. Apps was appointed chief clerk in the general baggage department and in May, 1907, he was promoted to assistant general baggage agent. He was appointed general baggage agent on January 1, 1909, and on January 1, 1916, he was placed in charge of the government mail traffic for the system. In April, 1922, the baggage and mail traffic ocean service was placed under his supervision. Mr. Apps became general executive assistant in July, 1925, the position he held until his death.

David C. Spoor, general agent, traffic department, for the Minneapolis & St. Louis at Spokane, Wash., died at his home in that city on August 10.

Harry J. Walker, auditor of disbursements of the Pennsylvania, with headquarters at Philadelphia, Pa., died on August 13, at the Presbyterian hospital in that city, at the age of 59.

Francis D. McConnell, assistant freight traffic manager of the Central of Georgia, with headquarters at Savannah, Ga., died on August 17, at the age of 59. Mr. McConnell was born at Fort Valley, Ga., on February 19, 1882, and was educated in the public schools of Savannah. He entered railroad service in 1897 as a mail clerk in the general freight agent's office of the Central of Georgia at Savannah. After serving as rate clerk, executive rate clerk and chief rate clerk, successively, he became assistant general freight agent on November 1, 1913, being

promoted to general freight agent on December 1, 1916. On March 29, 1930, Mr. McConnell was promoted to assistant freight traffic manager, the position he held until his death.

Aubrey Philip Ottarson, who retired in 1931 as comptroller of the Nashville, Chattanooga & St. Louis, with headquarters at Nashville, Tenn., died at his home in that city on August 10. Mr. Ottarson was born in Nashville on June 4, 1872, and entered railway service in 1887 as a rate clerk on the N. C. & St. L., later being advanced successively to chief rate clerk, chief clerk and assistant auditor of receipts. In 1914 he was promoted to comptroller, which position he held until his retirement.

Wilson S Kinnear, retired senior partner of W. S. Kinnear & Co., consulting engineers, New York, and at one time president of the Kansas City Terminal Railway, died at Grosse Pointe, Mich., on August 8. Mr. Kinnear was born at Circleville, Ohio, on May 25, 1864, and attended Kansas State University. He entered railway service in 1883 as an axman on construction for the Atchison, Topeka & Santa Fe, later serving as a rodman, draftsman, levelman and transitman. In October, 1884, he went with the Kansas City, Clinton & Springfield (now part of the St. Louis-San Francisco) as a rodman and assistant engineer on construction and in April, 1885, he became assistant engineer maintenance of way on the Missouri Pacific at Kansas City, Mo. A year later he became division engineer and office engineer on the Gulf, Colorado & Santa Fe and in August, 1887, he resigned to engage in the private practice of civil and hydraulic engineering at Los Angeles, Cal. In February, 1889, he went to Chile, South America, where he served at Santiago successively as office engineer, assistant engineer and acting chief engineer of the North & South American Construction Co. He returned to railroad service in the United States a year later as an assistant engineer maintenance of way on the Michigan Central (now part of the New York Central system) and in April, 1895, he was appointed supervising engineer on the construction of the Toronto, Hamilton & Buffalo (now jointly controlled by the New York Central and the Canadian Pacific) at Hamilton, Ont. Mr. Kinnear returned to the Michigan Central in September, 1901, as assistant superintendent of the Canada division and in July, 1902, he was advanced to assistant general superintendent. Two months later he was appointed chief engineer and in April, 1905, he was promoted to assistant general manager, with headquarters as before at Detroit, Mich. He was also appointed chief engineer of the Detroit River Tunnel Co., during the construction of the Michigan Central tunnels under the Detroit river. In August, 1910, Mr. Kinnear left the Michigan Central to become president of the Kansas City Terminal and in April, 1912, he left that company to become president of the United States Realty & Improvement Co., New York. He later organized and became senior partner of W. S. Kinnear & Co., consulting engineers, New York.